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Province of British Columbia

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To the Honourable
Robert Gordon Rogers
Lieutenant-Governor of the
Province of British Columbia

MAY IT PLEASE YOUR HONOUR

I have the honour to submit for your consideration the Annual Report of the Ministry of Agriculture and Food for the year 1984.

T.M. Waterland
Minister of Agriculture and Food

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Report of the Deputy Minister

To the Honourable T.M. Waterland
Minister of Agriculture and Food

Sir:

I am pleased to present the 1984 Annual Report of the British Columbia Ministry of Agriculture and Food. This report summarizes the activities of your staff for the twelve months ending December 31, 1984.

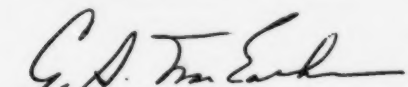
The agricultural industry overall experienced a better year in 1984, with farm cash receipts up from 1983 despite increased operating costs. Ministry programs and services made major contributions to this improved situation.

Changing industry needs and budget restraint across government necessitated a close examination of current methods of program delivery as well as the objectives of the programs themselves. An audit conducted by the Auditor General of the Province of British Columbia afforded the ministry an opportunity to examine management practices and program delivery and to initiate new approaches in these areas.

During the year ministry executive and staff worked with industry to develop strategies for growth and development of the agriculture and food sectors. In addition to addressing the economic importance of agriculture and food, the strategies looked at the potential for development of new markets and new products.

The ministry's efforts in exploring emerging opportunities in export marketing will help the agriculture and food industry take advantage of the recognized potential for the sale of specialty products and agricultural expertise in other areas of the world, especially the Pacific Rim. Ministry efforts were also directed toward development of another promising prospect -- B.C.'s vast potential for aquaculture.

Respectfully submitted,



Dr. G.A. MacEachern
Deputy Minister

MINISTRY EXECUTIVE AND DIRECTORS - 1984

Minister ..... Hon. H.W. Schroeder
Deputy Minister ..... Dr. G.A. MacEachern
A.D.M. Financial Assistance Programs ..... B.A. Hackett
A.D.M. Field Operations (retired May 31/84)..... I.C. Carne
(appointed June 1/84) ..... M.G. Oswell
Executive Director, Management Services (retired Aug. 31/84)..... J.F. Newman
Acting Executive Financial Officer (effective Sept. 1/84) ..... D.G. Davies
Executive Director, Policy Development and Economics ..... D.M. Matviw
Executive Director, Production Services (to May 31/84) ..... M.G. Oswell
Executive Director, Specialist and Regulatory Services ..... R.J. Miller
Regional Director, Central ..... R.N. Kohlert
Regional Director, Okanagan-Kootenay ..... B.A. Hodge
Regional Director, Peace River ..... B.E. Baehr
Regional Director, South Coastal ..... W.E.A. Wickens
Regional Director, Thompson-Cariboo ..... A.N. Isfeld
Agricultural Credit ..... M.K. Thompson
ARDA ..... J.R. Steele
Crop Insurance (retired July 31/84) .....P.R. Humphry-Baker
Crop Protection ..... J.C. Arrand
Dairy (retired Feb. 24/84) ..... D.J. Blair
Economics ..... A.B. Lauder
Engineering ..... T.A. Windt
Executive Officer ..... P.H. Pettyfer
Farm Income Insurance and Crop Insurance (effective Aug.1/84)..... R.N. Jarvin
Farmland Resources/Property Management ..... J.D. Anderson
Farm Products Finance ..... J.B. Phillips
Field and Special Crops ..... W.W. Wiebe
Information Services ..... R.A. Sera
Livestock ..... J.A. Pelter
Marketing ..... D.A. Rugg
Personnel ..... J.D. Cherrington
Soils ..... R.S. Bertrand
Veterinary (retired July 31/84) .....Dr. R.J. Avery
(acting appointment Aug. 1/84) .....Dr. M.P. Hewitt
Youth Development ..... D.E. Freed

MINISTRY MANDATE AND ORGANIZATION

The British Columbia Ministry of Agriculture and Food provides programs and services for the development of a sound commercial agriculture and food industry in B.C. The aggregate target is to assist the industry to increase agri-food output by 50 percent by 1995.

In 1984, as in past years, the Ministry's goals focused on helping the industry to increase food production ability, decrease dependency on imports, increase exports of agriculture and food products, produce more high value products, and increase direct employment.

These goals are dealt with through four main program areas:

1) Extension/Education programs which are designed to accelerate the adoption of new technology, information and management skills by B.C. farmers, agri-business, and food processors, and therefore to help them improve their competitiveness and profitability. Approximately 8,000 commercial producers and 600 food processing firms are served by this program.

2) Regulatory Services designed to maintain high quality and safe food products and production through enforcement of regulations and standards governing animal and plant health.

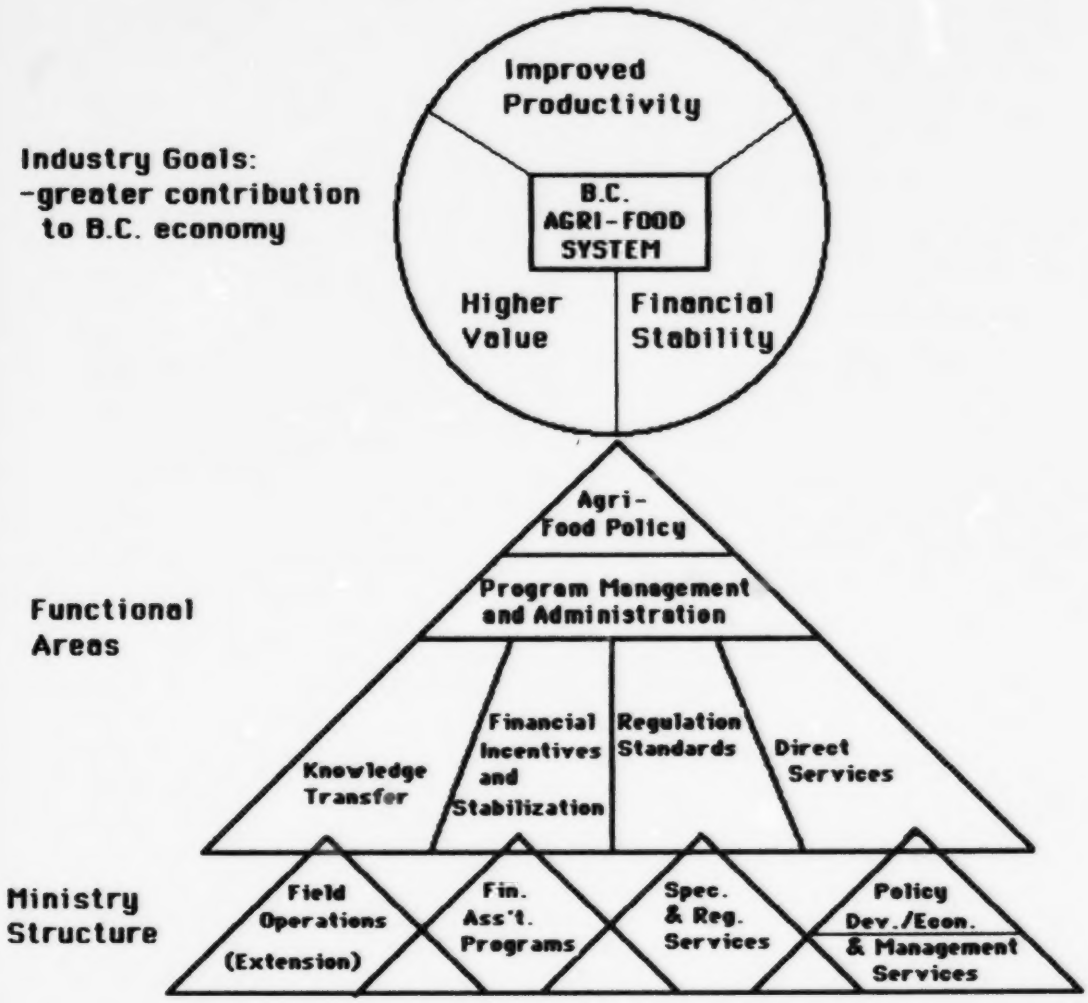
3) Financial Assistance programs designed to reduce risk and stabilize incomes from the impact of natural hazards and market fluctuations, enhance returns through orderly marketing, and stimulate investment in improved facilities, equipment and systems.

4) Direct Services that provide the agri-industry with specialized and essential laboratory and product analysis services not available from the private sector.

To deliver these programs and services the ministry is organized into five areas. Field Operations and Financial Assistance Programs are the two areas through which most of the ministry's programs are delivered to the agriculture and food industry. Specialist and Regulatory Services provides specialized extension and educational advice and deals with regulatory matters related to field operations. Two other areas, Policy Development and Economics, and Administrative Services, provide support services to ministry staff and, to some extent, to the agri-food industry.

The Deputy Minister and ministry staff liaise with industry, federal agencies and educational institutions in developing appropriate agricultural policy recommendations for government consideration. This liaison occurs through many areas, one of which is the British Columbia Agricultural Services Co-ordinating Committee (BCASCC) made up of ministry, university, and federal

Figure 1: Ministry Structure, Functional Areas and Industry Goals



government personnel involved in agriculture. BCASCC is chaired by the Deputy Minister. BCASCC subcommittees worked during 1984 on numerous policy and technical projects and recommended actions or funding of research projects to deal with the issues. The ministry allocated $150,000 during 1984 in support of these projects.

Co-ordination of government policy also occurs through the Deputy Minister as a member of the Deputy Ministers' Committee on Economic Development and other multi-ministry committees such as the Environment and Land Use Technical Committee. Through contact with industry commodity groups such as the B.C. Federation of Agriculture, and with the federal government during the year and at the annual agriculture ministers' conference, the provincial government's agricultural policies are developed to reflect situations and concerns being experienced by all involved in the industry.

Programming

In 1984, Ministry programs were tailored to meet changing economic conditions affecting the B.C. agri-food industry. Specifically, the programming objectives were to maintain the level of financial stability within the farm sector in light of an erratic economic climate, to explore new and innovative market opportunities for B.C. products and to assist B.C. farmers to improve their management and production skills.

Ministry programs are continuing to move toward a commodity approach in planning and delivery. Strategies were developed for a number of sectors including dairy, poultry, swine, beef, berry, vegetables, tree fruits, grains, oilseeds, and others. These will be developed further in 1985 and the years following.

The economic and operating environment in 1984 is described in the following section of the report.

Finances/Budget

Ministry expenditures for the 1984/85 fiscal year were $67.4 million. The approximate breakdown by administrative unit is shown in Figure 1.

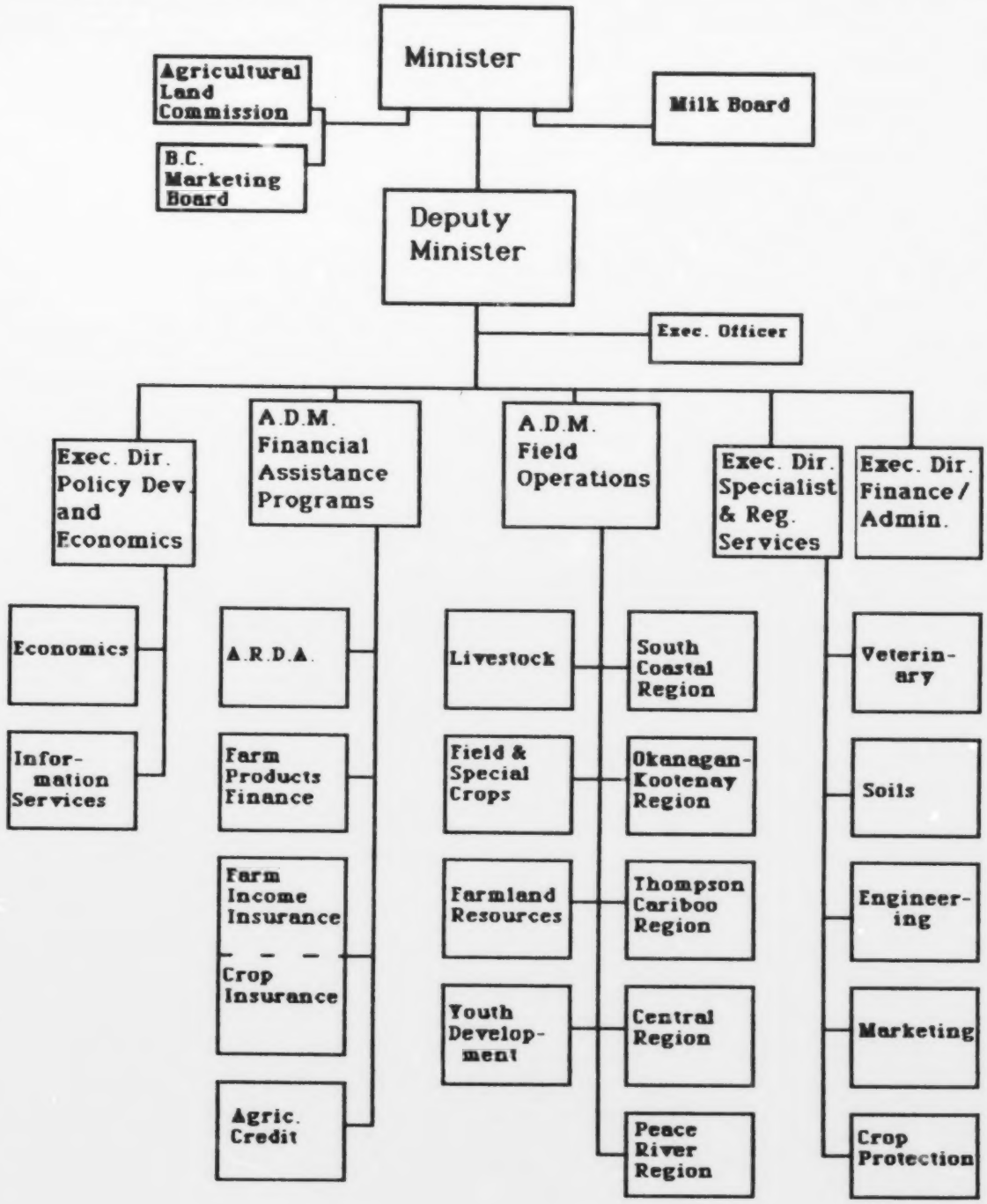
The financial statements contained in this report have been prepared by management in accordance with the accounting policies adopted by the Province of British Columbia. Management is responsible for the accuracy, integrity and objectivity of the information contained in these statements. Management maintains an extensive system of internal accounting controls to ensure that transactions are completely and accurately recorded on a timely basis, are properly approved and result in reliable financial statements.

These statements are incorporated in the combined financial statements of the province, which are examined by the Auditor General. The Auditor General expresses an opinion as to whether the combined financial statements present fairly the financial position, operating results and changes in financial position of the government of British Columbia in conformity with the stated accounting policies. This opinion is contained in the Auditor's Report which is included in the Public Accounts presented to the Legislative Assembly.

Staffing

The ministry continued to be subject to hiring constraints, and further challenges to "downsize" were met. At year-end, the ministry had 35 management personnel, 130 licensed professionals, and 343 members of the B.C. Government Employees' Union for a total of 508 full-time equivalents (FTEs), down from 596 the previous year. Operational changes, early retirement and normal attrition accounted for most of the staff reductions (Figure 2). The programs of the Field Operations division and the Specialist and Regulatory Services division involved approximately 70% of ministry staff, while Financial Assistance programs involved approximately 10% of ministry staff. Remaining staff were involved in ministry administration and support services.

Figure 2: 1984 Organization Chart



THE ECONOMIC AND OPERATING ENVIRONMENT IN 1984

British Columbia's economy experienced a real growth rate of only 0.5 percent in 1984, down from 1.5 percent in 1983. In fact, it was only in the second half of 1984 that there was a discernable moderate upward trend in output and employment. During the year, strong economic growth in the United States and Japan - the Province's two major trading partners - resulted in export shipments from British Columbia's major industries rising slightly from the levels of the preceding year.

The unemployment rate in the province in 1984 was 13.8 percent compared to 13.8 percent in 1983, due partly to the rapid growth of the labour force. Retail sales for the January-November period in 1984 were 5.2 percent (in nominal terms) above the 1983 level which represents in real terms an increase of only 1.2 percent. Rising interest rates in the middle of 1984 hindered recovery. In nominal terms, investment appears to have remained constant, and the prices received by producers for most commodities in 1984 were lower than in 1983, thereby preventing any significant improvement in their financial strength which had deteriorated severely during the 1981-82 world economic recession.

There were, however, some positive features to B.C.'s economic performance in 1984 which are reflected in the optimistic outlook for future years. The inflation rate of four percent was the lowest in the 14 year history of the Vancouver Consumer Price Index; wage settlements moderated further, declining to an average level of 2.3 percent for 1984; and an upward trend in employment which commenced in May resulted in an increase of 30,000 people employed by December, 1984.

The Agriculture and Food Industry

The general economic conditions outlined above had a profound influence on the performance of B.C.'s agriculture and food industry in 1984. The industry saw a revival of international demand and rising prices for most food commodities in 1984, compared to 1983 when producers were confronted with declining input prices and soft commodity prices arising from the economic recession. In fact, easier national monetary policies as inflation subsided stimulated growth in the overall demand for food products. In British Columbia, farm product prices rose by 4.1 percent, and retail prices rose by 5.1 percent.

As inflation subsided and as the glut in the international oil market began to affect energy costs, the prices paid by farmers for goods and services rose at a lower rate (3.4%) than the prices that they received for farm products (4.1%). This provided an incentive for expanded farm production. Moreover, the persistent relatively low value of the Canadian dollar relative to the U.S. dollar provided British Columbia with a competitive advantage in export markets for agricultural and food products, and also served to encourage more import substitution. Furthermore, the overvalued U.S. dollar motivated more U.S. residents to take vacations within Canada and British Columbia and to purchase associated goods and services including agricultural and food products.

In order to assist farmers in adjusting more readily to the economic environment in the post recession era, a number of emergency credit programs were introduced by a number of provinces in recognition of the dire financial straits in which farmers found themselves. As well, a National Task Force on Agricultural Finance was set up to investigate the adequacy of existing financial assistance programs in place by both levels of government.

On the international trade scene, pressures were being exerted for a general reduction of trade barriers between Canada and the United States, as well as for the establishment of a bilateral trade arrangement with the U.S.A. and other countries, particularly in non-grain commodities.

TABLE I

KEY ECONOMIC INDICATORS, BRITISH COLUMBIA

	1983	1984	% Change
Population	2,825,675	2,868,425	+ 1.5
Number of Farms	20,000	20,000	-
Food Processing	2.56 bil.$	2.68 bil.$	+ 4.7
Estimated Cultivated Farmland	964,600 ha	974,300 ha	+ 1.0
Farm Expenses	784.6 mil.$	822.0 mil.$	+ 4.8
Farm Cash Receipts	898.2 mil.$	956.5 mil.$	+ 6.5
Milk Sold Off the Farm	468.3 mil.L	478.9 mil.L	+ 2.3
Poultry Sales	46.6 mil.kg	49.3 mil.kg	+ 5.8
Egg Production	60.8 mil. doz.	59.0 mil.doz.	- 3.0
Apple Production	195.0 mil.kg	149.2 mil.kg	-23.5
Vegetable Receipts	65.2 mil.$	69.7 mil.$	+ 6.9
Floriculture & Nursery	43.4 mil.$	50.9 mil.$	+17.3
Honey Production	2.3 mil.kg	3.0 mil.kg	+31.4
Cattle Numbers	748,000 head	720,000 head	- 3.8
Hog Numbers	267,000 head	270,000 head	+ 1.1
Sheep Numbers	60,000 head	61,000 head	+ 1.7
Spring Wheat Production	169,000 tonnes	136,000 tonnes	-19.5
Canola/Rapeseed Production	73,000 tonnes	73,000 tonnes	-
Barley Production	185,000 tonnes	161,000 tonnes	-13.0

Figure 3: Ministry Expenditures 1984-1985

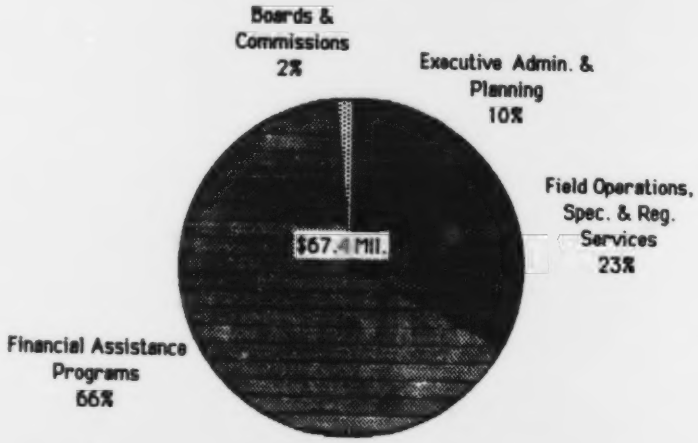
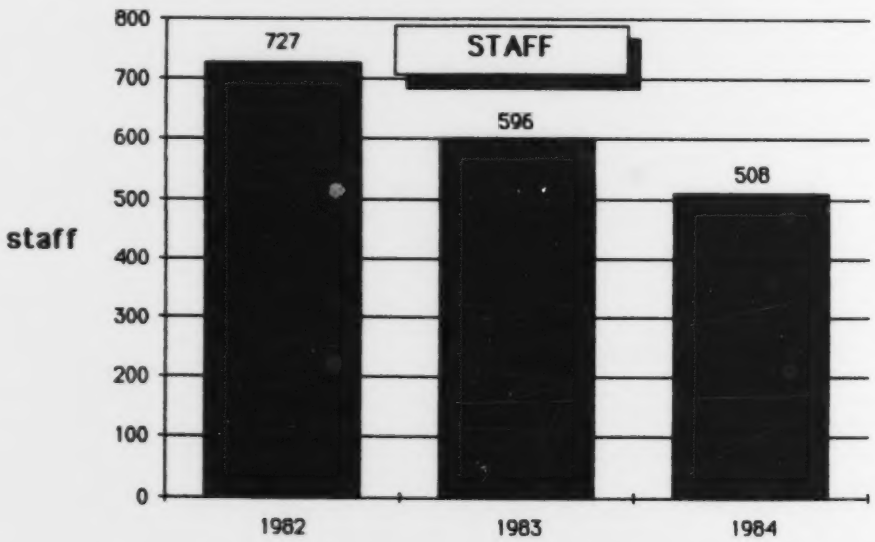


Figure 4: Ministry Staff Levels 1982-1984



1984 AGRICULTURAL REVIEW

Farm Cash Receipts

1984 was a much better year than 1983 for B.C. farmers. Aided by improvements in real disposable income and consumer spending in the provincial economy as well as stronger prices for farm products, the earnings of B.C. farmers rebounded to reach an estimated $971.3 million, an increase of 9.5 percent over the previous year.

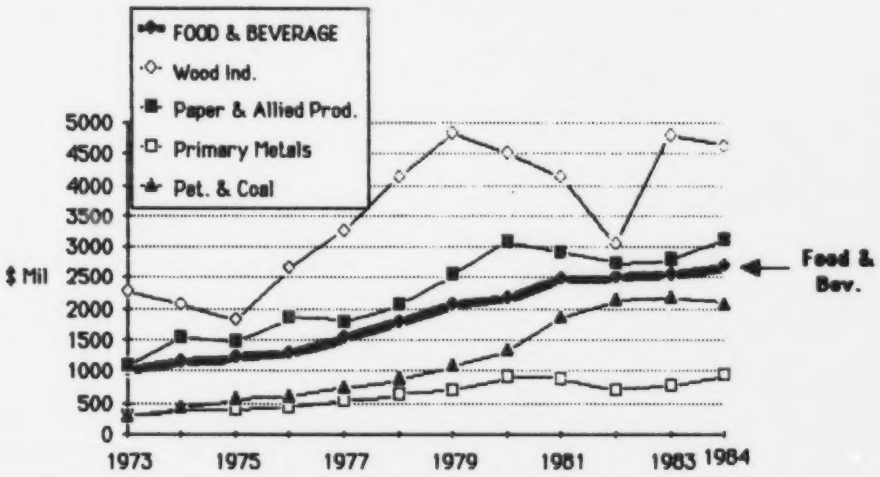
Not all agricultural sectors experienced gains, however. Cash receipts from the sale of grains, particularly barley, declined significantly due to a drop in acreage and production even though prices (other than for wheat) were higher on average than in 1983. Large payments under the Western Grain Stabilization Agreement (WGSA) and Crop Insurance programs supplemented producer receipts. Oilseed production showed little change but due to much higher canola prices, receipts increased by a substantial 60 percent over the previous year.

Fruit output in B.C. dropped appreciably in 1984, but higher prices held cash receipts at roughly the previous year's level. Vegetable production recovered in 1984 despite adverse weather, and cash receipts, which had shown little improvement in 1983 due to reduced volume and weakened demand, rose by 4.4 percent. Sales of floriculture and nursery products maintained the consistent growth shown in past years, and cash receipts grew by an impressive 17.4 percent to a new high of $50.9 million.

Receipts to livestock producers rose to an estimated $592.5 million, a gain of 8.6 percent over 1983. Modest increases in marketings of slaughter cattle and feeder calves coupled with appreciably higher prices resulted in a 16 percent increase in receipts to beef producers. Hog marketings, however, remained relatively unchanged and receipts showed only a slight increase. Cash receipts of dairy producers expanded by 5.2 percent to a high of $228 million. With sales of fluid milk dropping slightly, the gain in receipts reflected an increase in prices and the increased use of industrial milk for higher-valued products such as cheeses and evaporated milk.

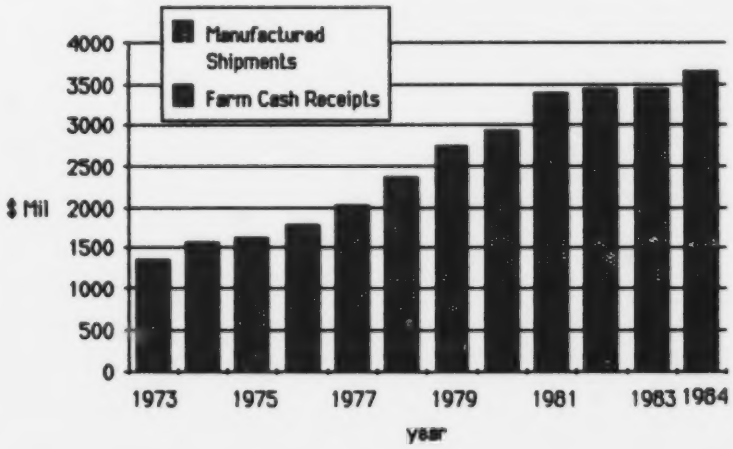
In poultry farming, receipts were up by a significant 13.3 percent due largely to a record volume of chicken meat production combined with an increase in price. Higher earnings from turkeys because of price strength related to greater demand was also a contributing factor. Similarly, receipts of egg producers gained by 5.6 percent as a result of higher average prices which more than offset a 4 percent drop in production due to lower consumption. Finally, beekeepers experienced a good year with production rising to the highest level on record. The resulting softness in honey prices, however, limited the gain in receipts to 4.7 percent over 1983.

Figure 1: B.C. Manufacturing Shipments 1973-1984



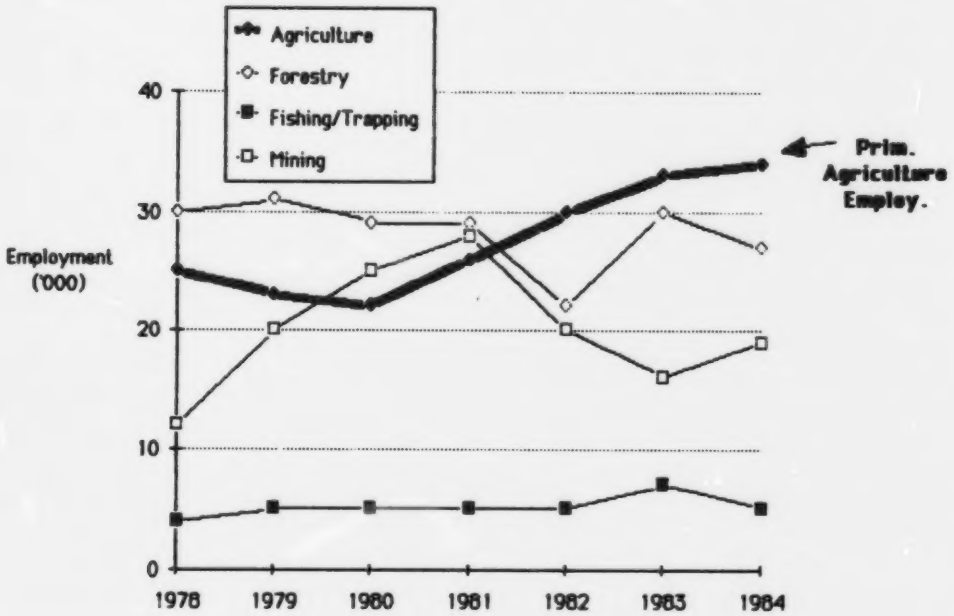
Source: Statistics Canada

Figure 2: B.C. Agriculture and Food Industry 1973-1984



Source: Statistics Canada

Figure 3: B.C. Primary Employment 1978-1984



Source: Statistics Canada

Farm Expenses

After a decline in 1983, farm operating costs and depreciation charges rose 4.2 percent in 1984 as agricultural production expanded. The largest single expense continued to be interest, up 5.0 percent from 1983 due to increases in both mortgage and non-mortgage interest rates over much of the year. Other large farm expense items such as wages, feed, and machinery were also up 6.6 percent, 6 percent and 6 percent respectively, but remained stable as a percentage of total farm operating expenses. Similar increases were noted in taxes (up 4.4 percent), farm rental (up 3 percent) and electricity and telephone (up 6.4 percent), while the costs of crop production (seed, fertilizer, pesticides, irrigation, etc.) and repairs to buildings remained almost at the level recorded the year before.

Farmland and Number of Farms

The area of cultivated farmland expanded to an estimated 974,300 ha, up by 1 percent over 1983. The number of farms in B.C. remained at 20,000.

Food Processing

Available statistics indicate that as of December 1984 there were 713 processors of food and beverages in B.C., a drop from 725 in 1983. The decrease in number was due both to business closures and amalgamations. With increased consumer spending in the economy, the factory value of agricultural commodities sold by these food and beverage firms in 1984 expanded to an estimated $2.68 billion, an increase of 4.7 percent over sales in 1983.

Retail Food Prices

In 1984, B.C.'s retail food prices rose at an annual rate of 5.1 percent, slightly above the 13-year low of 4.25 percent recorded in 1983. A significant rise in the price of fruit and vegetables (up by 13.1 percent) and moderate price increases in beef (up by 6.2 percent), dairy (up by 4.1 percent), eggs (up by 4.1 percent) and poultry (up by 4 percent) were mainly responsible for the increase. In real terms, B.C.'s retail food prices increased by less than 1 percent with a somewhat larger increase of 2 percent in the prices of food purchased from stores for home consumption.

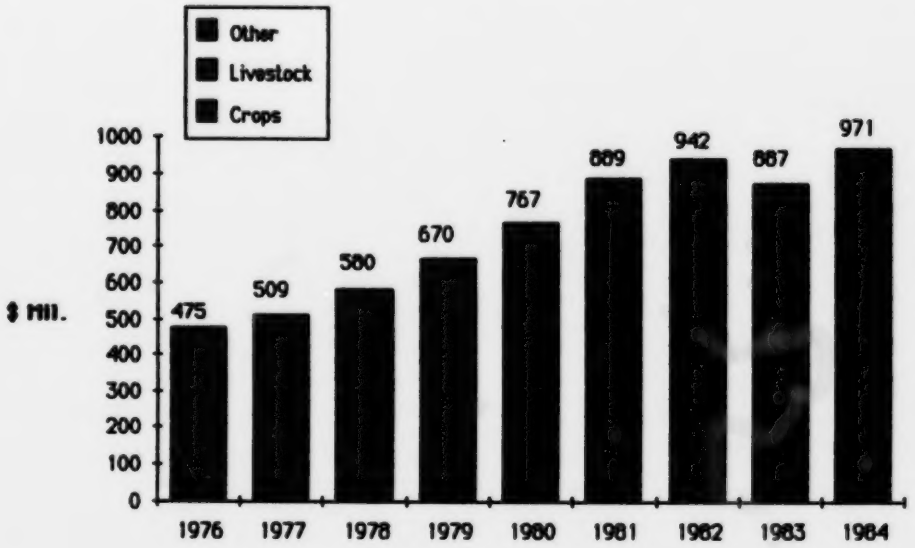
TABLE I

BRITISH COLUMBIA
FARM CASH RECEIPTS
1983-84
('000s of dollars)

	1983	1984	Percent Change 1984/83
Wheat	19,759	22,091	+ 11.8
Oats	1,970	1,967	- 0.2
Barley	15,315	9,432	- 38.4
Crop Insurance Advances, WSGA	2,948	12,355	+319.1
Rye	494	474	- 4.1
Canola	11,545	18,474	+ 60.0
Potatoes	18,295	22,052	+ 20.5
Fruits	93,680	96,267	+ 2.8
Vegetables	64,154	66,992	+ 4.4
Floriculture & Nursery	43,352	50,913	+ 17.4
Other Crops	24,873	26,839	+ 7.9
Total Crops	296,385	327,856	+ 10.6
Cattle and Calves	123,122	142,861	+ 16.0
Hogs	46,142	47,307	+ 2.5
Sheep and Lambs	1,657	2,103	+ 26.9
Dairy Products	217,000	228,222	+ 5.2
Poultry	77,415	87,733	+ 13.3
Eggs	59,970	63,347	+ 5.6
Honey	4,566	4,783	+ 4.7
Other Livestock	15,457	16,177	+ 4.7
Total Livestock	545,329	592,533	+ 8.6
Farm Woodlot Sales	16,002	15,730	- 1.7
Farm Income Insurance	28,177	26,761	- 5.0
Dairy Supplement Payments	143	19	- 86.7
Deficiency Payments	1,272	8,384	+559.1
Total Cash Receipts	887,308	971,283	+ 9.5

Source: Statistics Canada

Figure 4: B.C. Farm Cash Receipts 1976-1984



Source: Statistics Canada

TABLE II

BRITISH COLUMBIA

DISTRIBUTION OF FARM CASH RECEIPTS

1984

	$ Million	Percent
Grain and Oilseeds	64,793	6.7
Vegetables	66,992	6.9
Fruits	96,267	9.9
Specialty Crops (including floriculture and nursery)	77,752	8.0
Cattle and Calves	142,861	14.7
Hogs	47,307	4.9
Dairy Products	228,222	23.5
Poultry and Eggs	151,080	15.6
Other Farm Cash Receipts	96,009	9.8
Total Farm Cash Receipts	971,283	100.0

Source: Statistics Canada

Figure 5: Distribution of Farm Cash Receipts 1984

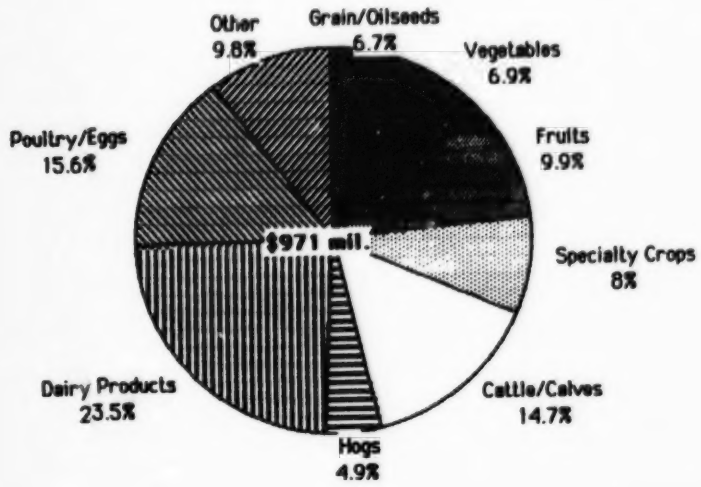


TABLE III

BRITISH COLUMBIA

FARM EXPENSES AND DEPRECIATION CHANGES

1983-1984

($'000s)

	1983	1984	Percent Change
Taxes	14,277	14,905	+ 4.4
Gross Farm Rent	16,038	16,519	+ 3.0
Wages	130,898	139,602	+ 6.6
Interest	139,079	146,098	+ 5.0
Total Machinery	100,681	106,773	+ 6.0
Fertilizer, Lime	25,193	26,104	+ 3.6
Other Livestock Expenses	22,856	20,703	- 9.4
Other Crop Expenses	31,909	32,409	+ 1.6
Feed	109,947	116,544	+ 6.0
Repairs to Buildings	12,741	12,652	- 0.7
Electricity and Telephone	19,325	20,557	+ 6.4
Miscellaneous	52,839	56,292	+ 6.5
Total Operating Expenses	675,783	709,158	+ 4.9
Depreciation on Buildings	36,246	35,182	- 2.8
Depreciation on Machinery	73,499	74,399	+ 1.2
Total Operating Expenses and Depreciation Charges	785,528	818,739	+ 4.2

Source: Statistics Canada

Figure 6: B.C. Farm Expenses 1976-1984

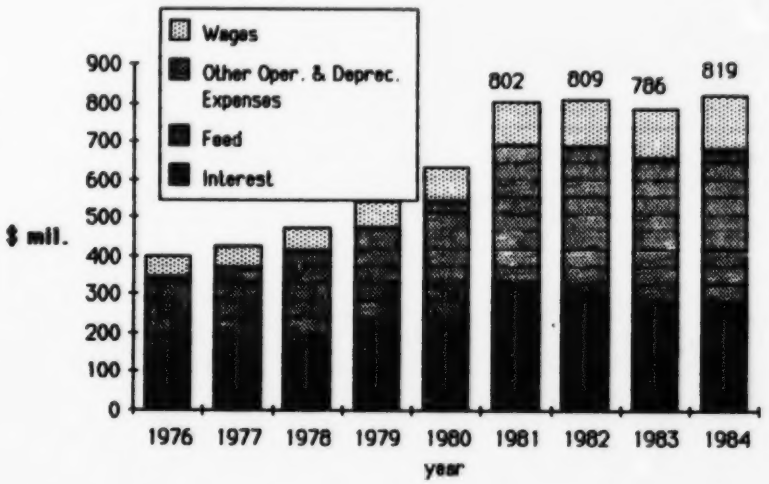


TABLE IV

BRITISH COLUMBIA

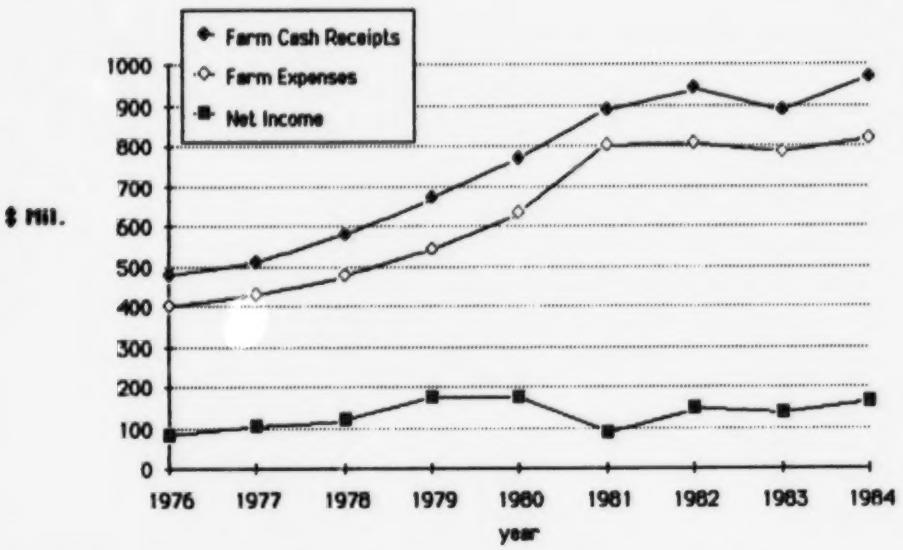
FARM INCOME

('000s of dollars)

	1983	1984	Percent Change 1983/84
Farm Cash Receipts	887,308	971,283	+ 9.5
Income in Kind	21,534	23,172	+ 7.6
Realized Gross Income	908,842	994,455	+ 9.4
Expenses	785,528	818,739	+ 4.2
Realized Net Income	123,314	175,716	+ 42.5
Value of Inventory Change	10,269	- 13,036	-126.9
Total Net Income	133,583	162,680	+ 21.8

Source: Statistics Canada

Figure 7: B.C. Farm Income 1976-1984



Field Operations

FIELD OPERATIONS

Field Operations programs and services are delivered by Regional Extension Services and Production Services.

Field Operations personnel provide programs to assist B.C. farmers in adoption of new skills and technology. In 1984 commodity and extension programs were designed to help farmers improve farm business management skills and decision-making through demonstration, seminars, one-to-one counselling, searching and screening of research, conducting trials and pilot projects, and preparation of publications and other media materials.

Regional Extension Services

Regional Extension Services staff of the ministry develop and deliver programs tailored to each of the province's five agricultural regions: Peace River, Thompson-Cariboo, Okanagan-Kootenay, Central and South Coastal. Each region is the responsibility of a director who ensures programs affecting B.C. farmers are delivered according to guidelines. The staff of Regional Extension Services is the largest group of the ministry in "front line" contact with farmers, providing information and education services from 23 regional and district offices.

The most important function of Regional Extension Services is to advise and educate producers on current and new technology in farm production, management and marketing in order to improve productivity and competitiveness. District and regional staff utilize resources of the technical branches, serving the whole province, in assisting the industry to resolve regional problems.

PEACE RIVER REGION - The Peace River Region grows most of the province's cereal and oilseed crops -- about 86 percent of the provincial total. The region is also a major producer of honey in addition to livestock and forage crops. In 1984 farm cash receipts were approximately $71.5 million, up from $65 million in 1983.

Cereal and oilseed production were hard hit by adverse weather which left 40 percent of the crop unharvested. This problem accentuated ongoing management concerns of producers and as a result a number of farm management programs were conducted. Extension programs addressed concerns about soil, crop and financial management with specific projects on farm financing, grain marketing and grain aeration.

A soil erosion and conservation program was established on soils that are among the most easily eroded in North America. Trials were conducted to measure soil losses under different management regimes.

Forage for the region's livestock is obtained from field crops and extensive community and Crown range pastures. The forage crop benefited from a wet spring, and although a late harvest meant lower quality, yields were high and as a result hay for winter feeding was in good supply. Extension work concentrated on pasture management, with emphasis on stocking rates, rotational grazing and re-seeding to new forage varieties, as well as control of predators such as wolves and bears.

Figure 1: Map of B.C. Ministry of Agriculture and Food Regions

A swine health program was promoted in the region. A 90 percent survival rate for calves was the result of mild March weather and well-attended calf-management meetings.

More intensive grazing practices, such as raising sheep on cultivated, fenced pasture to maximize investment and minimize losses to predators, are the key to expansion of the sheep industry. Ministry staff initiated a rotational sheep grazing project to demonstrate intensive grazing practices.

CENTRAL REGION - The major agricultural activity in the Central Region is beef production, accounting for 70 percent of all farm output. Other farm enterprises include dairy farming, poultry production, hogs and some sheep farming. Farm receipts in 1984 totalled $50.5 million, up from $46.1 million in 1983. The yields of most crops, with the exception of cereals, were down in 1984 as a result of the very cool spring, mid-summer drought and early fall frosts.

The region's beef industry saw a slow but steady improvement in 1984. The main livestock extension goals were to assist the industry to improve efficiency of beef production, improve beef market information, and optimize dairy production for maximum profit.

Considerable staff time and programming were dedicated to counselling farmers who found themselves under financial pressure because of the high debt/reduced equity situation in 1984.

In order to help producers improve their returns, regional staff actively supported Record of Performance testing of beef herds. Numerous herds on ROP showed significant performance improvement due to farmers' ability to manage herds more effectively. Other programs introduced included a market information service and programs to increase awareness of herd health practices, particularly for the dairy industry.

Cash crop options were explored wherever possible so farmers could diversify their operations and improve cash flow and stability. Staff participated in trials which evaluated and demonstrated the productive potential of a number of forages, cereals, oilseeds and grass seeds as well as broccoli, cauliflower and cabbage. Recommendations have been prepared on a number of viable alternative crops.

Forage species and varieties, fertilizer, liming, date and stage of harvest and forage mixtures were studied to determine their effect on protein, energy and mineral levels of feed. Preliminary results and recommendations will be available in 1985.

Studies were conducted to find the most efficient fertilizer application rates for forage and cereal crops and to evaluate their response to lime. Fertilizer response curves and recommendation tables developed for the ministry's Kelowna soils laboratory will be available by the fall of 1985.

With almost half the region's developed land in pasture use, more economical methods of renovation than the traditional plow/disc/harrow and seed method were studied.

THOMPSON-CARIBOO REGION - Beef production is by far the region's main farming activity, accounting for 70 percent of farm cash receipts. Forage crops, produced mainly to feed local beef herds, are next in importance, taking up 92 percent of all crop area. Farm cash receipts in 1984 totalled approximately $79.7 million, up from $72.8 million in 1983.

The region's five-year goal is to assist beef producers to improve their economic returns through increased kilograms of beef produced per cow, reduced age at slaughter and increased forage production per hectare; to diversify the agricultural economy encouraging producers to introduce alternate crops and livestock; and to maintain and enhance the use of agricultural land and rangeland.

In the last 10 years increasingly efficient irrigation systems have made possible more intensive agricultural operations, resulting in increased forage production. Expansion of the agricultural economy will depend on continued improvement in irrigation and an increase in the variety of commodities produced.

A major consideration in establishing alternative crops to help diversify the region's agricultural economy is finding a market for them. Work is being concentrated on developing crops that can be used in cattle feeding.

Long-term objectives for the beef industry are to increase the weight of marketable meat per cow and reduce the age of calves at slaughter. Last year, staff concentrated on equating herd health to calving, a major aspect of these objectives. Three seminars were held for producers: Branding and Animal Health, Economics of Feeding Cattle, and Calf Management and Rations.

Record of Performance analyses from 1977 to 1981 show an annual increase of seven and nine pounds in weaning weights for heifers and steer calves respectively. Some of this increase can be attributed to genetic selection but a good proportion is the result of improved management practices due to the use of performance records by producers.

OKANAGAN/KOOTENAY REGION - The region's main farming activities are tree fruit and grape production and ranching. In addition the area is a significant producer of dairy products, forages and vegetables. Farm cash receipts in 1984 were $217 million, up from $198.2 million in 1983.

Production of tree fruits, which accounts for more than 95 percent of the provincial total, was the lowest in many years, mainly due to poor weather. Surplus supplies worldwide resulted in extremely competitive markets and low returns to growers.

Intensification of orchard production through high-density plantings, which produce earlier and yield more fruit per acre, is now seen as the best way to improve net returns to many orchardists. Questions remain, however, regarding optimum spacing, rootstocks, training systems and other management factors before widespread adoption in British Columbia is possible. Staff members organized industry study tours to Europe and Eastern North America to investigate new techniques and production systems for possible adoption in B.C. in order to increase profits for provincial growers. Some of these techniques will be demonstrated in 1985.

The Okanagan grape crop was down slightly in 1984, partly due to some winter damage. Surplus wine production in Europe and the strong Canadian dollar have combined to exert downward pressure on wine prices in Canadian liquor stores. Information applicable to grape production in British Columbia was gathered by the grape specialist during study tours of Oregon and Europe. A large number of topics were addressed, including disease control, new varieties, importing procedures, trellising and cool climate viticulture.

Forage is produced in the region primarily to feed local beef and dairy herds. This includes one-third of the provincial alfalfa crop, produced for local consumption and shipment to other parts of the province.

The major extension initiative was the launching of a forage loss reduction program directed at assisting forage producers to reduce the estimated $9 million lost each year during harvesting, handling and feeding of the forage crop.

The region's beef industry accounts for 21 percent of the provincial cow herd, approximately 45,000 head, and makes use of some two million acres of Crown range. Regional staff have been co-ordinating ministry extension efforts with the main objective of helping producers increase weaning weights of calves. Activities included demonstrations or publications on management techniques designed to increase the pounds of beef produced per cow each year which involved nutrition, growth implants, insect control and range management.

Regional staff, in conjunction with staff from other branches, conducted farm management programs as well as extension programs on health and breeding for the area's dairy and swine producers.

SOUTH COASTAL REGION - The South Coastal Region contains 41 percent of the province's farms and produces dairy products, poultry, vegetable and berry crops, hogs and beef. Dairy products are first in importance (31 percent of income), with poultry and crops following. With farm cash receipts of approximately $560 million in 1984, up from $505 million in 1983, the region is the largest source of farm income in the province.

Poor spring weather in 1984 delayed land preparation and seeding operations and damaged planted crops. Crops that had been planted grew slowly because of accompanying cool temperatures. The hot dry summer allowed some crops to advance, but stressed others, shortening the season and yields. In general, forage quality tended to be lower than in previous years due to delayed harvests, over-maturity, lack of fertilization and weed infestations.

Extension programs focused on helping producers improve forage yields through the use of hardy varieties and management practices which would reduce the dependence of local dairymen on imported forage. Horticultural crops also suffered from adverse weather conditions. Staff conducted extension programs focusing on extending the growing season and diversifying the economy through encouraging farmers to introduce alternate crops, and improve production efficiencies.

Returns to dairy producers continued to be slightly above production costs, placing them in a somewhat better position in 1984 than in 1983. Other livestock producers continued to experience financial problems.

Ministry staff conducted numerous seminars and extension programs on financial management and production techniques for livestock producers. These included a dairymen's short course, which attracted over 450 farmers, a porkmen's seminar, a cattlemen's seminar on beef management and market opportunities, and a financial management course for cow/calf operators.

Production Services

The four branches of Production Services are Field and Special Crops, Livestock, Farmland Resources and Youth Development. Branch staff provide technical support to regional extension staff as well as dealing directly with farmers on some programs.

FIELD AND SPECIAL CROPS BRANCH - The branch provides technical services to aid farmers in the production of a wide range of crops including cereals, oilseeds, forage seeds, forage crops, field corn, potatoes, nursery crops, greenhouse crops and range. The branch administers the Weed Control Act, the Seed Potato Act, the Seed Grower Act and the Bee Act.

In 1984, branch staff conducted projects to test new crops, improve seeding technology, harvesting, processing and pesticide control aimed at more efficient crop production. Specialists also prepared plans for seven major commodities to determine where research or extension information is needed to remove obstacles to growth and development.

Staff conducted or supervised 230 projects including 93 cultivar adaptation trials, 56 projects on weed control and related technology, two major projects in apiculture and 79 on production management practices.

Although it is difficult to measure impacts over a short term, the intent of this research was to assist producers to increase crop quality and productivity, accelerate adaptation of crops to local conditions and improve their resistance or immunity to pests.

The ministry weed control program provided $240,000 in grants to eight regional districts, two livestock associations and the B.C. Cattlemen's Association. A total of $25,000 was invested in research and development of biological control of knapweed and in remote-sensing technology for identification of knapweed infestations.

Opportunities for expanding the province's nursery industry exist in producing specialty items such as grafted specimen trees, fruit trees, forest tree seedlings and in cultivating export markets. The ministry constructed a polyethelene propagation house at Abbotsford to conduct on-going demonstration in propagation methods, fertility and pest control.

A good potential exists for expansion in greenhouse crops, especially in export markets, providing growers adopt improved technology and reduce input costs. Ministry specialists conducted six research projects to test the application of new technology and to identify factors that restrict production. Results of these trials indicate positive benefits to growers. The ministry planned a new financial assistance program to help greenhouse growers increase productivity by adopting new technology and modernizing or expanding existing facilities. The program will be launched early next year.

Branch specialists also provided information on range management. Thirty-four projects were carried out, including eight species and cultivar adaptation trials, seven range fertilization trials, 11 weed control trials and eight management demonstrations. The results of these projects showed distinct production improvements were possible and ranchers adopted many of these practices.

Branch specialists conducted a number of cultivar trials to test performance of new wilt-resistant alfalfa varieties. The B.C. Forage Council published a summary of cultivar testing results. These test data were the basis of licensing of Vertus and provided information for regional crop recommendations.

Trials on grain corn were conducted at 10 sites to provide information for the 1985 field corn variety recommendations for use of corn growers.

Production of cereals and oilseeds in the Peace River Region decreased dramatically in 1984 due to adverse weather. Although only 60 to 80 percent of the crop was harvested in the fall, there was the prospect of some recovery in the spring. In response to the need to identify superior canola varieties and to demonstrate improved crop management practices, branch specialists conducted 33 field trials. Initial results of these tests indicate the use of recommended varieties and proven management practices could increase production efficiency and returns to producers by about 10 percent.

LIVESTOCK BRANCH - The branch provides the industry with current information on livestock production and management. It administers programs which aid producers to improve production efficiency and product quality and identify animals of superior genetic merit, and it develops and administers legislation related to livestock production and quality control.

A farm milk quality program ensures that milk produced on dairy farms meets standards set under the Milk Industry Act. Somatic cell counts were carried out for detection of mastitis, a serious disease of dairy cattle, which can result in significant annual economic losses. Since the start of the testing program, losses are estimated to have been reduced by 50 percent. In 1984, somatic cell counts were improved over previous years.

The brand inspection program continued to provide security of ownership to British Columbia's 3,000 beef cattle producers as well as to horse owners. Approximately 318,000 head of cattle and horses were brand-inspected in 1984.

The branch's beef cattle specialist has been working with cattle producers on development of a total management program called "Beefup" to help livestock producers maximize profits through improved management. A management guide and beef manual will be supplemented with computer programs and videos on general and technical aspects of beef production. It is expected to be available to producers in 1985.

A Pork Production Home Study course developed for new and established swine producers will be offered in early 1985. The course is designed to assist producers in lowering costs and improving returns by increasing conception rates, litter sizes and growth rates.

Opportunities exist for B.C. sheep producers to increase their share of the market as well as to increase per capita consumption. The ministry's sheep specialist worked in an advisory capacity with the B.C. Sheep Breeders' Co-operative on a market development program in the Kamloops-Okanagan region. Work will continue on establishment of a steady market in 1985.

A five-year extension plan for sheep production was developed, aimed at assisting producers to increase the number of lambs marketed per ewe bred and decreasing the market age of lambs. As a means of achieving these goals, a comprehensive Nutrition Guide for B.C. Sheep Producers was completed in draft form for distribution in 1985. Work on a Grazing Guide was also started.

The branch also provided support for the administration of regulations under the Livestock Brand Act (other than field brand inspection), the Cattle Horn Act, the Livestock Protection Act, the Livestock Industry Development Act, the Milk Industry Act and the Livestock Act. During the year, several policies were modified to streamline program delivery and reduce regulation.

A poultry health monitoring program was initiated in 1983 to reduce mortality in broiler birds through improved broiler breeder health and management. Some improvements in hatchery vaccination programs have been made.

British Columbia's Dairy Herd Improvement program is designed to help dairy producers improve performance of dairy herds through selective breeding, feeding and management. DHI records show that 20 years ago the average milk production per cow in a 305-day period was 4,978 kg with butterfat content of 198 kg. Today the average is 7,153 kg of milk per cow with a butterfat content of 253 kg. British Columbia cows have the highest average milk production in Canada, and interest has been expressed in B.C. dairy genetics by a number of countries, including China. In 1984 a proposal for privatizing the Dairy Herd Improvement Program was developed.

FARMLAND RESOURCES BRANCH - The branch, on behalf of the ministry, co-ordinates and prepares responses to resource use issues affecting the agriculture and food industry.

The branch administers the Property Management Program which allows Crown-owned farmland to be put into agricultural production by providing leases to farmers starting new operations or to producers wishing to expand existing holdings.

The program managed 136 properties totalling 5,266 ha. Of this total 14 were new, having been transferred from the Ministry of Environment, 11 were advertised for leasehold, 17 new leases were negotiated and rental reviews were completed for 33. Only two leases were terminated.

Staff completed agricultural development assessments for several areas of the province to help both local government and land owners identify opportunities for increased agricultural development.

The branch provides analytical support for a wide range of policy areas including tenure, taxation, land use regulations and property rights.

Staff prepared several papers for Cabinet proposing provincial programs that would assist the aquaculture industry in realizing its potential. A number of new programs and services are expected to be offered in 1985 and aquaculture could become a major new responsibility of the ministry.

Proposals for non-agricultural use of farmland were reviewed and assistance was given to ministry personnel and other agencies in planning agricultural land use. These included review of 19 official community settlement plans, each requiring definition of agricultural issues, continuation of the Agricultural Land Reserve Fine Tuning Program on eastern Vancouver Island, and a review of provincial soil and water development for possible funding under a renewed ARDA program.

YOUTH DEVELOPMENT BRANCH - The Youth Development program provides young people and their adult leaders with an opportunity to acquire training in agriculture and related subjects through participation in 4-H Club programs.

In 1984 there were more than 3,800 young people between the ages of nine and 19 enrolled in 269 4-H clubs. They were led by 948 adult volunteers. Farm young people make up 46 percent of 4-H membership in British Columbia, 43 percent are rural non-farm children and 11 percent are from urban areas.

Members participated in national conferences and inter-provincial exchanges and took part in provincial 4-H public speaking and demonstration programs.

British Columbia was host for the 1984 Western Provinces 4-H Seminar attended by 48 members. Thirty-four club members from B.C. spent a month in Japan on an exchange with 29 Japanese young people.

The development of livestock judging and evaluation expertise is a priority in the 4-H program. British Columbia's delegation to the International 4-H Judging Seminar in Regina won both the High Aggregate and the Reserve Aggregate awards as well as top placings in many of the individual livestock classes.

The branch is the co-ordinating agency for the International Agricultural Exchange Association in British Columbia. This program gives rural young people the opportunity to live and work with farm families in other countries. The province hosted an orientation seminar for trainees from Western Europe, New Zealand and Australia. In 1984 33 young people came to B.C. on this program while 18 B.C. members travelled to other countries.

The Youth Development Branch expects to work closely with Young Farmers' Clubs now being established in the province.

Specialist and Regulatory Services

SPECIALIST AND REGULATORY SERVICES

Specialist and Regulatory Services encompasses specialist branches and laboratories that provide service to Ministry extension personnel, farmers and other sectors of the agriculture and food industry. In 1984 the service consisted of five branches: Marketing, Veterinary, Soils, Engineering and Crop Protection. The veterinary diagnostic laboratory, plant diagnositic laboratory and a soil feed and tissue testing laboratories are also operated within this service. Several acts of a regulatory nature are administered including legislation related to the control of animal and plant diseases and insects. The service is responsible for administering the demonstration of agricultural technology and economics (DATE) program which provides funding for staff supervised evaluation and demonstration of new technological developments in food production and processing.

MARKETING BRANCH - Marketing Branch programs are designed to increase the use of British Columbia food products through services in marketing management, product and processing development, quality control and market analysis.

During 1984, the Food Industry Development Program (FIDP) was established. To be eligible for assistance, proposed projects must be within one of three areas: market research and development, development of new processing technology, or development of new food products. Assistance was limited to a maximum of 50 percent of a project's eligible cost.

Proposals for financial assistance were received from 30 food processing organizations. Twenty were approved for assistance totalling approximately $170,000. The projects included research and development of an innovative apple juice extraction process; market promotion of British Columbia estate winery products; new market development for fresh blueberries; research on consumer attitudes towards British Columbia-grown vegetables; market promotion of British Columbia lamb; a feasibility study on establishing a cheese plant on Vancouver Island; research, development and market promotion of new strawberry and blueberry juice products.

A study to identify the additional market for poultry products generated by Expo '86 was structured so that the basic information can be used by other commodity groups and processors to predict demand for their products. The study showed a significant increase is likely in poultry consumption for the duration of Expo. Following representations to the national chicken marketing agency, B.C.'s national quota allocation was increased by 1.5 million kg.

Due to the dissolution of the ministry's Dairy Branch, laboratory and dairy plant inspection staff joined the Marketing Branch. This unit now provides a milk and finished product quality inspection service under the Milk Industry Act and a food processing and extension service.

At the Dairy Laboratory, tests were carried out to determine the butterfat, protein and lactose content of milk to provide data to the Milk Board for making payments to producers. The information is also used in programs such as Dairy Herd Improvement and Record of Performance and by the Canadian Goat Society for daily herd management and genetic selections.

A branch member acts as secretary to the Provincial Marketing Board which assists the provincial commodity marketing boards in formulating policies that will result in the growth and development of a sound B.C. agriculture and food industry, and ensures that they implement marketing schemes in accordance with legislation. It encourages the national marketing agencies for eggs, chicken and turkey to adopt policies fair to all provinces. Details of board activities are available in the Annual Report issued by the B.C. Marketing Board.

The branch's market research and analysis unit provided the agriculture and food industry with services in market information, analysis, research and management. With the change to a commodity focus in the latter part of 1984, the unit became the Horticulture Marketing Unit. It will focus on all aspects of horticulture and cereal crops marketing, and add market development and extension to existing programs. A vegetable price monitoring service offered to the industry significantly reduced and in many cases eliminated price cutting due to ignorance of market conditions.

In 1984, market development activities focused on encouraging hotels, restaurants and institutions to increase use of B.C. foodstuffs and on developing effective liaison with such organizations as the Canadian Food Service Executives Association and the Restaurant and Food Services Association of B.C. This resulted in increased sales to the hotel, restaurant and institutional trade and improved communications within the industry.

Market development staff took part in a number of presentations designed to make the B.C. food industry aware of opportunities associated with Expo '86. These included the Victoria, Kamloops and Vancouver restaurant shows, the Canadian Food Service Executives Association annual mini show and a number of seminars. This effort will continue up to and during the world's fair.

VETERINARY BRANCH - The Veterinary Branch is responsible under the Livestock Disease Control Act, for the overall health of the provincial annimal population. This responsibility is addressed through presentation of animal health extension programming, operation of the Veterinary Diagnostic Laboratory and administration of the related Acts.

Under the federal/provincial meat inspection program meat inspection was provided at seven abattoirs -- four in the Fraser Valley and three on Vancouver Island. In addition, 37 plants in the province are under full federal inspection. The meat inspection program ensures that only wholesome, contaminent- and disease-free meat and meat products reach the consumer.

The animal health program monitors animals for disease which could cause significant losses by death or decreased production in livestock. Where possible, assistance in control is provided. No serious outbreaks of exotic animal or poultry diseases were seen in specimen examinations by the Veterinary Laboratory at Abbotsford or in field observations during the year.

Regular inspection of most livestock sale yards by branch personnel was discontinued on March 31, 1984, although the yards are still being checked on an unannounced basis.

SOILS BRANCH - The Soils Branch provides technical advisory services on the protection, maintenance, development and efficient use of British Columbia's agricultural soils to extension specialists, farmers and other government and non-government agencies. It provides advice to the Agricultural Land Commission on the capability of land for agriculture and collects data and develops methods for evaluating the adequacy of B.C.'s soils and water resources to meet future food production goals.

Soil fertility and waste management programs were designed to guide farmers on proper fertilization practices for maximum returns. Farmers sought advice from the branch on how best to apply manure wastes, a valuable source of plant nutrients, to the land.

Branch specialists conducted 10 field research trials to improve the ability to evaluate the fertility status of soils and to provide more precise guidance on fertilization practices. Field trials measured an alfalfa response to lime of up to 57 percent increased yield. Staff provided assistance to the City of Vernon in modification of effluent irrigation practices. A 20 percent increase in the length of the irrigation season was attained, reducing effluent storage problems and the amount discharged in Vernon Creek.

Agricultural land drainage programs were conducted to address a situation in which returns are reduced on thousands of hectares of agricultural land in B.C. due to excess water. Drainage programs in the Boundary Bay area resulted in yield increases of 247 percent for strawberries, 31 percent for grass and 80 percent for corn. Good drainage increased field access by 97 days.

A water runoff and soil erosion control demonstration project was established in 1982 to evaluate the effectiveness of a drainage system in controlling runoff and soil erosion on sloping land in the Fraser Valley. Annual soil loss exceeded 40 tonnes per hectare on the undrained area, but was reduced to less than one tonne per hectare where drains were installed. In the fall of 1984, a cover crop was established which reduced soil loss to less than one tonne per hectare even on the undrained area.

The branch advised producers, irrigation districts, and extension agents on irrigation practices which allowed for maximum yields while preventing soil degradation and conserving water.

Soil, Feed and Tissue Testing Laboratory analysed 8,152 samples of soils and plant materials submitted by producers, the results were used for making recommendations on fertilizer applications. This work was done on a fee for service basis. In addition the Laboratory analysed 7,712 samples in support of research and diagnostic programs conducted by Ministry field staff. The laboratory feed testing section provided nutrient analysis and feeding recommendations for livestock producers.

ENGINEERING BRANCH - The branch recommends systems for land drainage, waste management, irrigation, mechanization, farm structures, and land and range development.

Branch staff work in co-operation with the Soils Branch by providing technical information and a planning service to help producers resolve their drainage problems.

Staff developed design standards for trickle and sprinkler irrigation systems, irrigation system clearances from transmission lines and backflow prevention requirements.

Water management projects included an evaluation of centre pivot irrigation systems; fertilizer application through trickle systems; and frost control on cranberries. Results on the projects will be available in early 1986.

Technical information was developed for B.C. producers and agribusiness on farmstead planning, construction methods and materials, heating, ventilation and refrigeration systems and materials handling systems for livestock and crop buildings. Considerable attention was directed to ventilation problems.

Evaluation and demonstration of high-tensile, smooth-wire fencing has proven to many livestock producers the effectiveness of this new fencing technology.

In order to address the continuing concerns about environmental problems in the rural-urban fringe, the branch continued to develop waste management guidelines to minimize pollution potential and reduce flies, odor and other nuisances.

The branch's mechanization programs deal with machinery selection and management, machinery design and operation, food processing and engineering, farm machinery parts and service availability and farm safety.

Equipment development and demonstration projects continue to be a major thrust of the mechanization program. In 1984 projects included adjustment assistance for mechanical raspberry harvesters, modification of heavy-duty seeding equipment for rangeland, development of wetland meadow tillage equipment and design of a cauliflower harvesting aid.

Land and range development programs included the design of systems for range seeding, pasture renovation and wetland meadow development. Range seeding equipment especially developed by the branch for work on B.C.'s rugged Interior rangeland has seeded more than 30,000 acres since 1976. The additional forage produced is worth in excess of $1 million annually. Work has begun on design of a smaller disc and seeder for use in areas not accessible to the existing equipment.

CROP PROTECTION BRANCH - The branch provides growers and ministry staff with current pest control information and develops ecologically sound methods of insect, plant disease and vertebrate pest management. It administers regulations under the Plant Protection Act, participates in surveys and eradication programs to prevent the introduction and spread of pests and promotes safety in the use of pesticides.

The nematode diagnostic service at Cloverdale was in heavy demand. Nematodes, tiny worm-like creatures, are particularly damaging to berry and nursery stock. Farmers could not grow these crops successfully without nematode control.

Staff worked in co-operation with Simon Fraser University researchers to determine the reason for different levels of soil-borne diseases and evaluate organisms which might be used in biological control of Pythium root rot in cucumbers.

Under the branch's pesticide control program, pesticide use in the province is monitored. Special requests by farmers for use of specific pesticides are documented and referred to the Pesticide Division, Agriculture Canada, which is responsible for pesticide registration in Canada. As well, staff educate commercial growers and the public in the use of pesticides. Two hundred samples of fresh domestic produce were collected and analyzed for pesticide residue. Results to date are below the maximum allowable residue limit.

The branch's regulatory service administers regulations under the provincial Plant Protection Act. In the Okanagan, 47 trees infected with little cherry virus were destroyed. This was a decrease from 64 in 1983, continuing a decline in incidence of this disease. This program is credited with saving the Okanagan Valley's cherry industry.

In the Lower Fraser Valley, 45 farms were surveyed for bacterial ring rot of potatoes. The disease was cleaned up on five farms, a reduction from nine in 1983.

Plant Health Division, Agriculture Canada, has placed a quarantine on junipers, one of the hosts of pear trellis rust, for export from the Fraser Valley. As a result of the provincial clean-up and certification program, shipments of junipers can still be made to Ontario, Quebec and the United States.

The branch co-operated with Agriculture Canada on a gypsy moth survey and eradication program, which appears to have eradicated an infestation at Fort Langley. Small infestations at Chilliwack and Courtenay will be treated in 1985.

Research projects are initiated at the request of commercial agricultural interests, ministry branches and federal agricultural authorities, to cover all forms of pest control. For example, staff worked on field trial evaluations of alfalfa varieties which showed the variety Vertus has the highest resistance to verticillium wilt. In response to requests from extension personnel and the B.C. Cattlemen's Association for an alternative rodenticide, two formulations of zinc phosphide were tested for control of the Columbian ground squirrel.

A vertical electric deer fence was erected at a ministry experimental vineyard near Duncan.

Increasing interest by greenhouse growers in non-chemical control of whitefly prompted a trial which determined the most effective shape and placement of traps.

Several pesticides were evaluated for effectiveness in dealing with leafminers, a major pest of greenhouse-grown flowers, particularly chrysanthemums.

Chemical and cultural methods for control of holly leaf and twig blight were investigated and recommendations given to growers.

Staff contributed to a study funded by the ministry and the B.C. Coast Vegetable Co-op which showed that rapid cooling of carrots immediately after harvest greatly reduces the level of disease.

Fraser Valley lettuce fields in the Cloverdale, Marine Drive and Burnaby areas were monitored throughout the season for the lettuce aphid. Sprays were applied only when the aphid was present. This program is responsible for reducing crop loss from $1 million in 1982 to negligible levels in 1983 and 1984.

In a trial on the Douglas Lake Ranch at Merritt, a pour-on formulation of fenvalerate was highly effective against the Rocky Mountain wood tick, a serious pest of range cattle in the Interior. Insecticide-impregnated ear tags were found to be ineffective against this pest.

Biological methods for control of manure-breeding flies, including the use of nematodes to attack and kill larvae, were evaluated on Fraser Valley livestock and poultry farms.

Financial Assistance Programs

FINANCIAL ASSISTANCE PROGRAMS

The goal of the ministry's Financial Assistance Programs is to encourage growth and development of the British Columbia agriculture and food industry and to reduce selected risks to entrepreneurs.

Financial Assistance Programs have two broad objectives: investment and stabilization. Depending on the nature of the project, financial assistance may be offered to applicants as direct incentives, reductions in the cost of investment, or as loan guarantees, offsetting high risk in potentially profitable ventures.

Assistance made to help stabilize the industry reduces losses due to large fluctuations in market price or production costs, or crop losses due to uncontrollable perils such as weather.

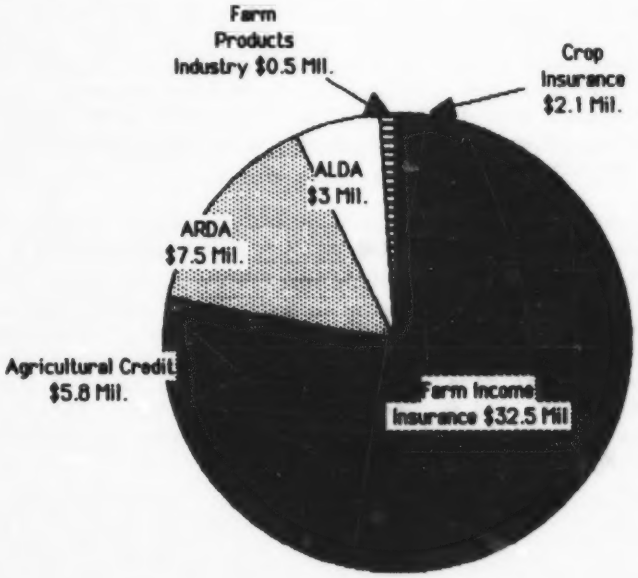
For the 1984/85 fiscal period resources available to Financial Assistance Programs were 51 full-time equivalents (FTEs) of staff time and $49.8 million in operating costs, incentive payments and shared premiums for individuals or groups.

Excluding operating costs, direct funding for the fiscal year was provided as follows:

- Crop Insurance premiums: $2.1 million
- Farm Income Insurance premiums: $32.5 million
- Agricultural (farm) Credit incentives: $5.8 million
- Agriculture and Rural Development Agreement incentives: $7.5 million

Figure 1: B.C. Ministry of Agriculture and Food

Financial Assistance Programs 1984


Farm Products Industry $0.5 Mil.
Crop Insurance $2.1 Mil.
ALDA $3 Mil.
ARDA $7.5 Mil.
Agricultural Credit $5.8 Mil.
Farm Income Insurance $32.5 Mil

In addition to appropriated funds, $3 million was available for placement as loans through the Agricultural Land Development Special Account and $.5 million was available as incentives from the Farm Product Industry Special Purpose Account.

Of the appropriation funding, $9.6 million relates to federal/provincial agreements for Crop Insurance and ARDSA. Of this total the province will receive up to $5.9 million from the federal government. These recoveries equal the total amount of Crop Insurance premiums and up to 50 percent of approved funding for eligible costs under the ARDSA program.

Financial Assistance Programs are administered by four branches: Agricultural Credit, Agriculture and Rural Development Agreement (ARDA), Farm Products Finance, and Farm Income Insurance and Crop Insurance.

ARDA BRANCH - Agriculture and Rural Development Agreement (ARDA) Branch programs fund projects that help increase the quality and quantity of British Columbia's food production and assist in creating new employment in the agriculture and food industry.

Branch activities are carried out under the terms of the ARDA Act and the federal-provincial Agriculture and Rural Development Subsidiary Agreement (ARDSA).

All ARDSA projects are implemented by the province and paid for with provincial funds. The federal share of agreed expenditures is claimed and credited to the Consolidated Revenue Fund.

Projects are funded in four areas:

Part I - Research, planning, training and market promotion projects to identify, research and develop new opportunities in the agri-food industry.

For example, the B.C. Honey Producers' Association and the ministry worked to produce a honeybee stock better adapted to B.C. winters to improve honey production, produce more populous post-winter hives and reduce consumption of stored honey by bees over the winter. A project in Pemberton helped improve the production methods used in developing virus-free seed potatoes. Project results are helping growers produce quality seed potatoes to compete on domestic and international markets.

Part II - Co-ordinated resource management projects to help stabilize the beef industry by working with other resource users on increasing the grazing capacity of Crown range.

Range improvements in 1984 included seeding, building of management control systems such as fences and corrals and installation of stock watering facilities. The work was done on 133 Crown range units of 3.5 million ha, or about 41 percent of usable B.C. Crown grazing reserves. These developments have improved quality and quantity of forage and have led to better utilization of range.

Part III - Primary resource development projects to increase the agricultural productivity of underdeveloped land through improved drainage and irrigation.

In 1984, these included improvements to 30 major community irrigation systems and 15 major drainage areas as well as 10 drainage and irrigation projects for smaller groups of producers.

By providing outlets for excess runoff, the drainage projects resulted in increased production of higher value crops on some 11,700 ha of land operated by 925 farmers.

Improved irrigation in 33 areas across the province resulted in increased production of fruits, vegetables and high quality forage crops on 1,190 farms. The 9,500 ha of land involved were previously undeveloped or underdeveloped, due to lack of water.

Part IV - Support services and community development projects to assist secondary food processors and support services in the creation of opportunities for rural employment, leading to greater agricultural stability.

Increased production requires increased inputs such as feed, fertilizers, seed and power, as well as improved market facilities. Incentives were provided for private sector development of 25 agricultural input services, 48 rural electrification projects and 76 market facilities. An additional 800 full-time jobs were created and 1,000 jobs were saved when plants which might otherwise have closed were modernized. The $15 million of government funding provided for these projects under Part IV generated in excess of $50 million in private sector investments.

While it is too early to assess the full impact of the ARDSA effort, reactions from branch staff and applicants have been positive.

Discussions are continuing with Agriculture Canada on an agri-food development agreement for implementation in the 1985/86 fiscal year. This agreement will emphasize soil and water conservation and improvement as well as productivity enhancement.

FARM PRODUCTS FINANCE BRANCH - Farm Products Finance programs encourage development and expansion in agricultural processing and support services.

Financial assistance is provided through grants and low-interest loans to support expansion of existing processors and to assist development of new processed agricultural products. Loan guarantees are provided to reduce risks to commercial lenders where need can be proven.

The programs and activities of the branch are implemented and administered under the Farm Product Industry Act. Funds required for loans and grants are provided from the Farm Product Industry Special Account within the Consolidated Revenue Fund.

A Food Industry Development Project was initiated in conjunction with the Marketing Branch on a trial basis in 1984. It provides incentives to encourage small and medium-sized food and agricultural processors to undertake potentially profitable market research and development and food product development.

The branch's general financial assistance program offers loan guarantees, grants, and direct loans to assist specific agricultural or food processing enterprises with plant development, expansion or modernization, market and product development, feasibility studies, and continued operation of a processing plant.

During the year, 23 requests for loan guarantees and 15 requests for grants were received. Of these 38 applications, detailed analysis was undertaken on 20 guarantee requests and 14 grant proposals. At the end of the year one loan guarantee and six grants had been approved. The balance of the projects were either referred to other agencies, rejected, withdrawn or are under review. Assistance is only offered to firms that cannot acquire funding elsewhere on reasonable terms. Eligible projects must provide significant benefits to agricultural production in British Columbia.

The projects approved included:

- a loan guarantee to East Chilliwack Fruit Growers' Co-operative to enable the purchase of 1.25 million pounds of strawberries above contracted levels. The guarantee allowed the firm to obtain financing to pay growers for the berries, which would not have been purchased otherwise, and to process and store the product for future sale.
- a grant to the British Columbia Blueberry Co-operative in Richmond of $20,000, representing 10 percent of the cost of installing pre-cooling equipment so the co-operative could direct more of its production to the fresh market.
- a grant to Superbrand Foods Ltd., Abbotsford, of $9,000, equalling 20 percent of the capital costs of establishing a processing plant to use surplus eggs in the production of cooked, peeled and pickled eggs for the institutional market.
- a grant to the B.C. Coast Vegetable Co-operative of $15,000, 50 percent of the cost of a study on the viability of establishing a potato French fry plant in the Lower Mainland.

The branch monitors previously provided loans, grants and guarantees. During the year, loan guarantees to three firms whose financial situations had improved were terminated by their banks.

Table I outlines the assistance extended to individual firms during 1984 under the General Assistance Program of the Farm Products Finance Branch:

TABLE I

GENERAL ASSISTANCE PROGRAM, 1984

ORGANIZATION	PROJECT PURPOSE	ASSISTANCE PAID
Association of B.C. Grape Growers	continuing grape research program	$ 22,700
B.C. Blueberry Co-operative Association	plant pre-cooling expansion	24,400
B.C. Fruit Growers' Test Orchard Ltd.	continuing tree fruit research program	32,980
Gramineae Holdings Ltd.	continuing program for seed industry research	13,685
Superbrand Foods Ltd.	new further processing egg plant	8,515
Total		102,280

Table II outlines the guarantees and loans outstanding at the end of December 1984 with comparable figures for 1983.

TABLE II

GUARANTEES AND LOANS OUTSTANDING
AS AT DECEMBER 31, 1984

Guarantees	December 31, 1984	December 31, 1983
Cloverdale Lettuce & Vegetable Co-operative	$ -----	$ 24,203
Creston Co-operative Packers	-----	33,943
East Chilliwack Fruit Growers' Co-operative	1,000,000	-----
Pan-Ready Poultry (1980) Ltd.	2,000,000	2,000,000
Scott Poultry Co-operative Association	1,004,577	1,941,476
Sun Dew Foods Ltd.	-----	40,000
	$ 4,004,577	$ 4,039,622
Loans		
Hodgson Bee Supplies Ltd.	$ 29,000	$ 42,000
Ra-Bitco Farms Ltd.	110,000	110,000
	139,000	152,000
Total	$4,143,577	$4,191,622

FARM INCOME AND CROP INSURANCE BRANCH - Farm Income and Crop Insurance Branch programs are designed to reduce fluctuations in farm incomes and the risk associated with production of selected commodities. The clients of the branch are producers of major farm commodities.

The Farm Income Insurance Program provides an insurance scheme that reduces farm losses caused by factors such as low market returns and/or rapidly rising operating costs. Each plan covers a specific type of commodity, for example, tree fruits, and has a unique set of eligibility criteria and operating procedures. Premiums and indemnities are based on the number of units of production sold, with premiums shared equally by the client and the Provincial Government. Participation in the program is voluntary.

The program is administered under the provisions of the Farm Income Insurance Act (1974).

Factors affecting farm income insurance payments in 1984 included:

- excess supply, low prices and poor weather affecting berry crops, particularly strawberries;
- high feed costs for swine producers, contributing to increased costs of production;
- reduced harvest but continued low prices for tree fruits.

The number of participants in the Farm Income Insurance Program increased to almost 5,000 in 1984. Nearly 80 percent were beef and tree fruit producers (see Table III).

TABLE III

PARTICIPANTS IN FARM INCOME INSURANCE PROGRAMS

Plan (or Commodity)	Number of Participants 1984	Number of Participants 1983	Increase (+) Decrease (-) 1984
Beef	2,012	1,999	+ 13
Blueberries	127	118	+ 9
Broiler Hatching Eggs*	40	39	+ 1
Greenhouse Vegetables	89	86	+ 3
Potatoes	99	97	+ 2
Processing Strawberries	176	50	+ 126
Processing Vegetables	38	37	+ 1
Raspberries	284	192	+ 92
Sheep	113	129	- 16
Swine	190	267	- 77
Tree Fruit	1,830	1,629	+ 201
	4,998	4,643	+ 355

*Plan expired December 31, 1984

Figure 2: Farm Income Insurance for Apple Producers 1979-1983

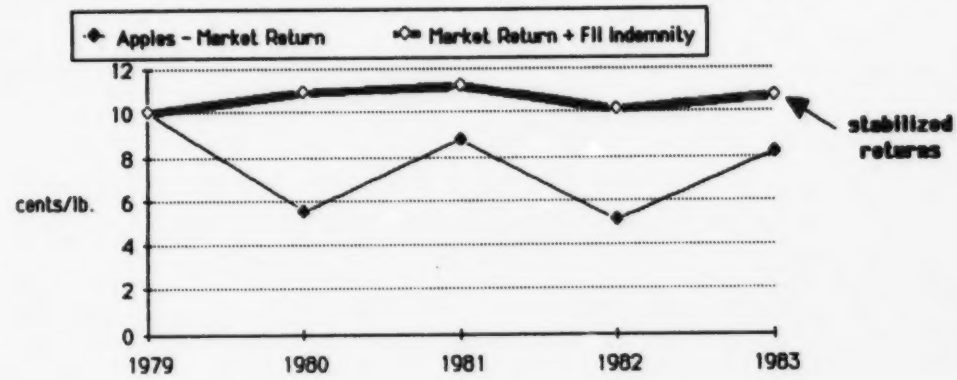


Figure 3: Farm Income Insurance for Swine Producers 1981-1984

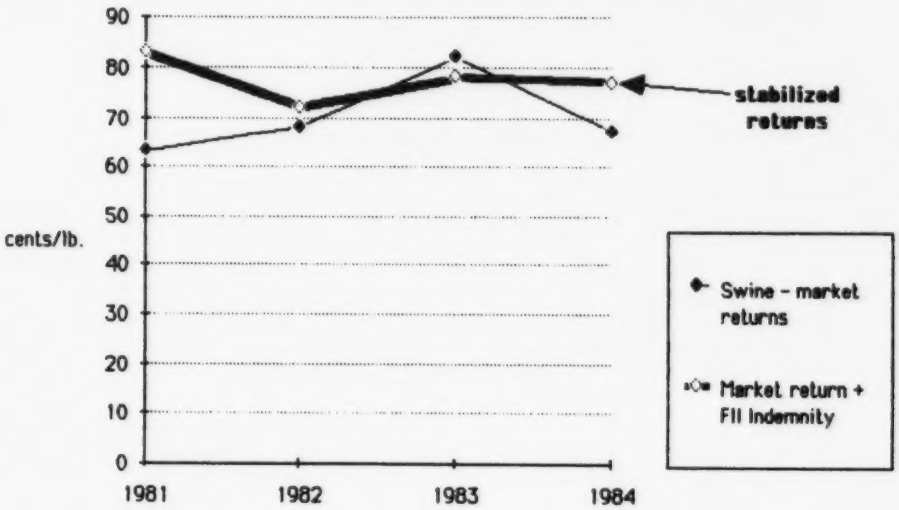
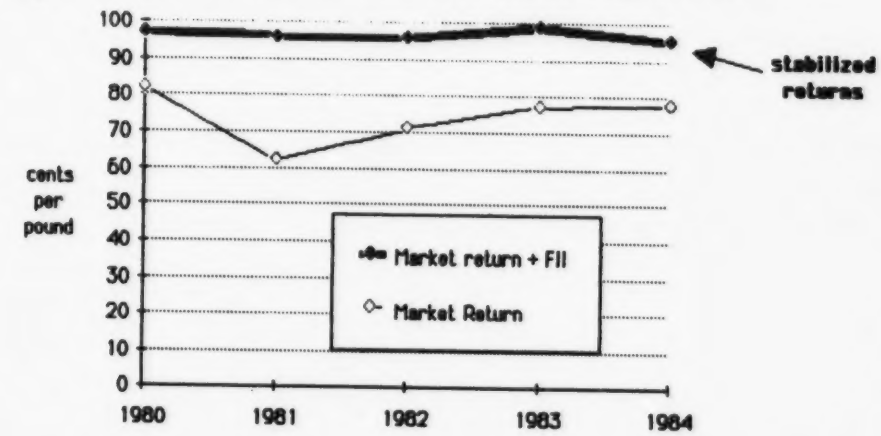


Figure 4: Farm Income Insurance Beef (Calf) Plan 1980-1984



In 1984, $27.1 million of net indemnities was distributed after deduction of producer premium contributions. Comparative figures for 1983 and 1984 are shown in Table II. Advances were also paid under the tree fruit and blueberry plans to producers facing cash flow problems. Detailed financial information for the fiscal year is published annually in the public accounts. The Farm Income Insurance Program stabilized returns to producers as illustrated in Figures 2, 3 and 4.

TABLE IV

DISBURSEMENTS IN FARM INCOME INSURANCE PROGRAMS

Plan (or Commodity)	1984*	1983
Beef	$ 10,454,690	$ 12,082,920
Blueberry	(101,510)	(108,906)
Broiler Hatching Eggs	0	22,605
Greenhouse Vegetables	314,670	1,096,410
Potatoes	480,150	1,217,690
Processing Strawberries	765,520	(48,202)
Processing Vegetables	200	16,525
Raspberries	587,460	868,718
Sheep	87,460	110,655
Swine	2,539,050	91,410
Tree Fruit	11,971,760	12,824,858
Total	$27,099,450	$28,174,693

* The 1984 figures provided are for the calendar year

Farm Income Insurance plans are reviewed annually by the B.C. Federation of Agriculture and the branch. Financial status, level of reserves, and long-term industry development needs are reviewed periodically. Program changes to encourage quality production of tree fruits were discussed with the B.C. Fruit Growers' Association and initial steps implemented.

The United States trade action on raspberry and pork exports has created a concern regarding the effect of Farm Income Insurance programs on trading relationships with U.S. customers. Further analysis of these impacts will depend on the eventual outcome of investigations by the International Trade Commission in the U.S. and the results of any appeals of decisions resulting from the initial trade actions.

Crop Insurance is a comprehensive insurance scheme which protects producers' incomes where crop losses are caused by adverse weather and other uncontrollable factors. Participation in the program is voluntary.

Crop Insurance premiums are shared equally between the Federal Government and the producer. The Province of British Columbia pays the administrative costs and provides a re-insurance fund which stabilizes the program in those years when indemnity payments significantly exceed premium revenues.

The Crop Insurance program operates under federal and provincial legislation and the Canada/British Columbia Crop Insurance Agreement. Relevant legislation and contracts include: Crop Insurance Act/Regulations (Canada); Insurance for Crops Act (B.C.); Continuous Crop Insurance Scheme Regulation (B.C.); and Continuous Crop Insurance Contract (B.C.).

Major losses and claims in 1984 were the result of:

- low grain yields in the Peace River region. Losses were due to poor germination followed by an extended hot dry period in summer. The most significant losses resulted from an early snowfall that prevented completion of the harvest before winter.

- hail damage to tree fruits, particularly apples and pears.

- low tree fruit yields due to poor pollination and cool temperatures in the spring.

- damage to strawberries as a result of a wet spring in the Fraser Valley.

Crop Insurance plans cover producers of 25 types of crops in six commodity groups (see Table V).

TABLE V

PARTICIPANTS IN CROP INSURANCE PROGRAMS

Plan (or) commodity)	1984 Number of Producers Insured	1984 Acres	1983 Number of Producers Insured	1983 Acres	Increase (+) Decrease (-) Number of Producers Insured	Increase (+) Decrease (-) Acres
Berry	110	2,812	114	2,262	- 4	+ 550
Forage	106	12,866	134	17,223	- 28	+ 4,357
Grain	291	117,744	296	132,756	- 5	-15,012
Grape	119	2,143	104	2,221	+ 15	- 78
Tree Fruit	1,463	16,662	1,370	16,235	+ 93	+ 427
Vegetable	52	6,125	40	4,594	+ 12	+ 1,531
	2,141	158,352	2,058	175,291	+ 83	-16,939

In 1984, the Government of Canada contributed $2.8 million in premiums and B.C. paid $800,000 in administrative costs. Coverage totalled $68.7 million in 1984, and indemnities paid out exceeded $10 million.

Advisory committees, made up of provincial staff and insured grower representatives, annually review the level of coverage, terms of coverage, participation levels and claim-adjusting practices.

A comprehensive review of the tree fruit plan was carried out by a task force consisting of producers and representatives from the federal and provincial governments. The task force evaluated the success of the program in meeting the needs of growers in compliance with legislation, regulations and policy guidelines. This review will be the basis for improvements to the tree fruit plan.

AGRICULTURAL CREDIT BRANCH - Agricultural Credit programs encourage investment in the agricultural industry by offering financial assistance or incentives to farmers and loan guarantees to commercial lenders.

The programs reduce the cost of borrowing funds for farming, provide additional security to commercial lenders to stimulate financing of high-risk but potentially profitable farm ventures, provide incentives to encourage selected agricultural developments and provide loans to producers at preferred rates for selected forms of land development.

The Guaranteed Loan Program is designed to increase the credit available to B.C. farmers from commercial sources by guaranteeing farm loans which have a higher risk than commercial lenders are prepared to take. This practice minimizes interference with the private credit market, and leaves the cost of credit administration with the lenders. The program is available through chartered banks and credit unions to farm businesses (as defined in the Agricultural Credit Act) that have a high probability of producing a positive cash flow over the medium-to-long term but are unable to secure credit because of inadequate collateral, low equity, limited managerial experience, or their lender's inexperience with the commodity they produce.

In 1984, the branch granted 20 guarantees totalling $2,260,000. At the end of the year, 98 guarantees totalling $10,215,293 and carrying a contingent liability of $3,116,053 were in place (See Table VI). During the year, claims totalling $753,254 were paid on nine existing guarantees.

TABLE VI

AGRICULTURAL CREDIT ACT GUARANTEED LOAN PROGRAM
ACTIVE GUARANTEES BY ENTERPRISE, DECEMBER 31, 1984

ENTERPRISE	1974 - 1983 inclusive No.	1974 - 1983 inclusive ($000's)	1984 No.	1984 ($000's)	Total No.	Total ($000's)
Dairy	23	3,142	7	832	30	3,974
Beef	5	361	0	0	5	361
Grain & Forage	4	300	0	0	2	300
Poultry	8	550	2	100	10	650
Vegetables	8	802	2	363	10	1,165
Orchards & Vineyards	0	0	0	0	0	0
Mixed	11	1,304	1	165	12	1,469
Swine	13	1,291	4	266	17	1,557
Sundry	8	482	4	257	12	739
TOTAL	78	8,232*	20	1,983*	98	10,215

* Rounding discrepancy - actual figure 8,233
- actual figure 1,982

Since 1980, the number of guarantees granted annually has declined, due to reduced farm cash flow prospects. This has caused the program's target group of high cash flow, low equity farms to decline. Lenders have experienced increased losses on agricultural loans and have raised the risk threshold of farm loans that they will accept, even with a guarantee.

During the latter part of 1984, substantial interest was expressed in the program by aquaculture producers and their lenders. Oyster and salmon culture are expanding and lenders who are not familiar with the industry are relying on the guarantee program to reduce their risk in financing these types of farms.

The decline in net cash flows in B.C.'s agricultural industry has caused an increase in the failure rate of farm businesses that have participated in this program. The drop in farmland prices has caused shortfalls to occur when the assets of some farms are liquidated to repay debts, resulting in an increase in claims on guarantees.

The Partial Interest Reimbursement Program provides direct assistance to farmers to reduce the cost of agricultural loans by giving a rebate for a portion of the interest paid.

All claims are reviewed to confirm eligibility of applicants and to verify loan purposes, and audits are made before and after claims to confirm accuracy of interest costs reported.

During 1984, 4,310 applicants received an average rebate equal to 18.6 percent of their 1983 interest costs for a total of $10,981,000 (See Table VII). The table shows that the major beneficiaries of the program are dairy, beef and poultry producers.

The amount reimbursed for 1983 was $10,981,000. The total amount reimbursed since 1974 was $88,537,000. The distribution of these amounts by farming enterprise is shown in Table VII.

TABLE VII

AGRICULTURAL CREDIT ACT PARTIAL INTEREST REIMBURSEMENT PROGRAM

ENTERPRISE	1983 %	$ 000	1974 - 83 %	$ 000
Dairy	29.19	3,207	27.77	24,586
Beef	17.77	1,951	22.43	19,858
Sheep	.37	41	.35	313
Forage	4.53	497	5.39	4,771
Berries	5.41	594	.67	593
Poultry	11.25	1,235	11.26	9,972
Vegetables	4.41	484	3.43	3,037
Orchards & Vineyards	8.23	904	5.58	4,941
Mixed	7.18	788	12.12	10,733
Swine	4.83	530	3.42	3,022
Sundry*	6.83	750	7.58	6,711
TOTAL	100.00	10,981	100.00	88,537

* The mink category, used in 1974-82, has been incorporated into the sundry category.

The Asparagus Production Incentive Program, begun in 1980, offers a grant to reduce interest costs on eligible loans used to establish new asparagus acreages.

In 1984 12 participants enrolled in the program, planting 338 acres to asparagus. Nine applicants remain eligible for the 1984 program. Interest reimbursement benefits paid in 1984, representing claims on interest paid in 1983, amounted to $9,786. Total benefits paid to date are $40,226.

The Rain Damaged Crop Program provides reimbursement of a portion of interest costs on new operating loans contracted by farmers to replant crops after the record rainfalls in the South Coastal Region in 1981.

In 1984 payments were equal to 25 percent of the average chartered bank prime rate on operating loans contracted in 1982 and 1983. The eligible bank loans are based on 1981 acreages.

In 1984 16 farm operators received benefits totalling $14,000. The program, over the two-year term, has paid $139,450 in benefits to farm operators in the South Coastal Region.

The Agricultural Land Development Assistance (ALDA) Program is designed to encourage agricultural land development to help farmers increase the production of primary agricultural products.

Loans to a maximum of $25,000 must be used to pay for work and materials relating to permanent improvements to land classified as farmland under the Assessment Act. The interest rate is one-half the average prime interest rate of the province's principal banker and is established on April 1 and October 1. The interest rate for each loan is established at the time the application is approved and the loan contract issued. Contracts issued between January 1 and September 30 were at a rate of 5.5 percent with contracts issued between October 1 and December 31 at 6.25 percent per annum.

In 1984, 236 contracts issued for $2,193,273 which in combination with outstanding uncompleted contracts represented the work in progress. In the year, contracts were completed for total loans of $1,701,000 (See Tables VIII & IX).

TABLE VIII

AGRICULTURAL LAND DEVELOPMENT PROGRAM - By Region

	SOUTH COASTAL	THOMPSON CARIBOO	OKANAGAN KOOTENAY	CENTRAL	PEACE RIVER	TOTALS
Acres Cleared						
1983	122	392	317	1,437	2,161	4,429
Amount ($000's)	$141	$66	$86	$199	$144	$636
1984	46	373	445	854	2,684	4,402
Amount ($000's)	$41	$76	$97	$169	$204	$587
Acres Broken						
1983	73	185	147	1,086	1,957	3,448
Amount ($000's)	$35	$15	$17	$74	$104	$245
1984	53	311	262	680	3,626	4,932
Amount ($000's)	$23	$27	$19	$54	$212	$335
Irrigation Amounts ($000's)						
1983	$36	102	147	--	--	$285
1984	$169	103	87	--	--	$359
Drainage Amounts ($000's)						
1983	$128	—	6	--	--	$134
1984	$104	—	72	—	4	$180
Other Amounts ($000's)						
1983	$140	12	5	11	9	$177
1984	$94	5	75	14	37	$225

TABLE IX

AGRICULTURAL LAND DEVELOPMENT PROGRAM - TOTAL EXPENDITURES

	1983		1984	
	No.	Amount	No.	Amount
Applications Received	204	$3,205,843.57	247	$3,551,091.78
Contracts Issued	206	2,312,677.06	236	2,193,236.80
Expenditures		$1,477,623.82		$1,560,145.78
Contracts Outstanding		956,199.71		1,052,911.17
		$2,433,823.53		$2,613,056.95
Accounts as at December 31	2,609	$19,272,336.44	2,600	$18,704,965.84
Number of Delinquent Accounts as at December 31	186	$208,924.43	176	$235,609.48
TOTAL LOAN PAYMENTS RECEIVED		$2,730,453.97		$2,318,661.26

Policy Development and Economics

POLICY DEVELOPMENT AND ECONOMICS

Policy Development and Economics provides program support services primarily to the ministry executive in the areas of industry and program planning, economic and policy analysis, information services and computer systems, and provides management information and training through ministry field staff to the agricultural community of British Columbia. The three management units are:

- Policy Development and Planning
- Economics Branch
- Information Services Branch

Strategic planning programs were carried out and were aimed at identifying appropriate long-term directions for industry development, and supporting government policies and programs, based upon external and internal economic, political, and social factors and changes. In 1984, the main activity consisted of planning an agriculture and food industry development strategy, which reviewed industry opportunities and constraints, identified potential growth levels, and reviewed program changes and initiatives. This strategy identified an opportunity to assist the agriculture and food sector in expanding 25 percent by 1990.

Policy analysis services were designed to provide coordination within the ministry and government of policies which are aimed at, or have an impact on, the agriculture and food sector. For example, staff participated in a federal-provincial task force on farm financing, which examined improvements and additions to agricultural credit and related programs.

British Columbia's position favouring the payment of Crow rate subsidies to grain producers rather than to railways was provided to the Hall Commission of Inquiry on Payment of Crow Rate Benefits. Many other issues were studied and recommendations proposed for appropriate action.

During 1984, computer systems were enhanced throughout the ministry to improve administrative efficiency. A new word-processing system purchased in 1983 was expanded to most of the ministry's regional and district offices in 1984, leading to higher efficiency and cost savings throughout the ministry. This efficiency has contributed, to some extent, to meeting ministry goals of staff reduction. In 1984, several more field offices acquired micro-computers, gaining access to a broad range of information and improving communications with the agricultural community and head office.

ECONOMICS BRANCH - Economics Branch programs emphasized delivery of business management information and training to the agriculture community to help enhance the economic development and viability of the agriculture and food industry. The branch carried out economic analyses for the ministry and analyses of programs and policies affecting the B.C. agriculture industry.

These included analyses of taxation regulations, both within and outside of B.C., the impact of transportation and feed freight assistance policies, the effect of increased agricultural employment compared to other resource sector employment, the impact of national financial stabilization programs on B.C. farmers, and an analysis of farm assistance levels in B.C. compared to other regions in North America.

The branch prepared economic and statistical information on the agriculture and food industry. Assistance is given Statistics Canada in collection of information relating to honey, field crops and national farm surveys. Improvements made in 1984 in collection procedures for horticultural statistics have resulted in more meaningful and timely data.

In addition to preparing statistical publications, branch staff provided information on the B.C. agri-food industry with information on agricultural production, marketing and finances.

Branch educational services are directed at farmers, agribusiness, other agencies and ministry staff. In future, branch staff will be emphasizing the development and technical support of educational programs and encouraging field staff to assume more responsibility for their actual delivery.

The major educational thrust of the branch is the Farm Business Management Program which comprises two major elements, extension education and technical support.

A conference titled Farm Business Challenges 1984 brought together some 340 farmers, representatives of agribusiness and others who have an interest in farm business management. A number of speakers gave timely and practical information dealing with challenges facing the agriculture and food industry.

The Financial Management Training Project, designed to assist farmers to improve financial management skills concluded its fifth and final year in 1984. In the final phase of the project, micro-computers were used in a "hands-on" approach to look at factors affecting profitability of the farm or ranch. This use of a new generation of "friendly computers" was enthusiastically received by producers and holds much promise for useful integration of production and financial management information.

A wide range of micro-computer software has been developed by the branch to address both the financial and economic costs of production for the major commodities produced in B.C. Other software developed related to livestock Record of Performance, marketing strategies, drainage, greenhouse operation and soil analysis. A farm business analysis program was developed for beef producers. By using micro-computers as an advisory tool, staff are able to integrate financial, production, marketing and economic factors to improve the quality and relevance of recommendations made to farmers.

In the technical support program area, specialized advice was given to producers, agribusiness firms and staff on a range of financial and marketing topics. Branch staff also assisted in planning 45 workshops and presentations.

INFORMATION SERVICES BRANCH - Information Services Branch programs are designed to communicate production and marketing developments to B.C. farmers and agri-business, as well as to create better public awareness of the importance of B.C. agriculture.

In the past, ministry extension staff either contacted farmers personally or used printed materials in educational programming. However staff reductions in 1983 and 1984 created a need to find more effective ways to communicate. The branch promoted increased use of educational aids such as slide-tape shows and videotapes and the use of publications in workshops and courses.

Sixty-two technical and educational publications were printed by the ministry in 1984. The main project of the publications program was the annual revision of the Crop Production Guides. Handbooks for beef cattle and sheep producers were printed. A publication for berry growers on major insect and mite pests was substantially revised. Other publications included Infertility and Sterility in Dairy Cattle, Estate Planning for B.C. Farmers, Peach Leaf Curl and Soil Sampling.

During 1984, several films, video and slide-tape programs were completed. They included a film on the poisonous weed timber milkvetch and its effects on livestock, a slide-tape on pollution control procedures for livestock producers, a slide-tape on asparagus marketing and a video-tape of farm management specialists discussing management techniques useful to farmers. Staff investigated other areas of North America as potential sources of audio-visual programs and began assembling the video-tape library for use by extension staff. The objective of this project, funded under DATE, was to provide a broad range of audio-visual programs that could be incorporated into extension programs.

The ministry's public relations program works to gain recognition for agriculture and its contribution to the provincial economy. Programs are aimed at other government ministries, the public and businesses both at home and abroad.

Presentations were prepared for use at agricultural conferences in British Columbia and overseas, among them the Agro-China '84 symposium, at which the Minister was a keynote speaker. The audio-visuals and printed material at the ministry's booth created tremendous interest in B.C.'s agricultural technology.

Audio-visual presentations were used to inform industry, government officials and staff of key program directions of the ministry as well as marketing opportunities for B.C. products.

News releases and articles were prepared by the branch and advertisements concerning ministry events, programs and policies placed in farm publications. In addition, the branch took over responsibility for administering the legal advertising requirements of the ministry.

BRITISH COLUMBIA MINISTRY OF AGRICULTURE AND FOOD OFFICES

Abbotsford	205-33780 Laurel Street V2S 1X4	852-5211
	Engineering Branch, 33832 South Fraser Way V2S 2C5	852-5363
	Agriculture & Food Centre, 32916 Marshall Rd. V2S 1K2	852-5350
	Veterinary Laboratory, Box 100 V2S 4N8	852-5400
	Chief Veterinarian	852-5370
	Crop Insurance	852-5217
	Property Management	852-5205
Burnaby	Dairy Laboratory, 3705 Willingdon Ave. V5G 3H3	434-3326
	Agricultural Land Commission	660-7000
Chilliwack	5-8635 Young Road South V2P 4P3	795-9471
Cloverdale	17720-57th Avenue, Surrey V3S 4P9	576-2911
Courtenay	209-420 Cumberland Road V9N 5M6	334-1239
Cranbrook	202-135 10th Avenue South V1C 2N1	426-1535
Creston	456 Northwest Boulevard, Box 1980 V0B 1G0	428-3255
	Market Service Information	428-3258
	Production Information	428-3253
Dawson Creek	1201-103rd Avenue V1G 4J2	784-2225
Duncan	238 Government Street V9L 1A5	746-6183
Fort St. John	201-9711 100th Avenue V1J 1Y2	787-3240
	Crop Insurance Branch, 221-9711 100th Ave. V1J 1Y2	787-3214
Kamloops	162 Oriole Road V2C 4N7	828-4552
Kelowna	1873 Spall Road V1Y 4R2	861-7211
	Media Production	860-3287
Oliver	Court House, Box 940 V0H 1T0	498-2420
Penticton	Horticulture Information	493-3366
Prince George	Experimental Farm Site, R.R.#8, RMD 7 V2N 4M6	565-6466
Quesnel	208-350 Barlow Avenue V2J 2C1	992-4245
Salmon Arm	Samara Building, Box 639 V0E 2T0	832-1630
Sidney	Bldg. 20, Saanichton Research Station	
	8801 E. Saanich Rd. V8L 1H3	656-0941
Smithers	Government Building, Bag 5000 V0J 2N0	847-7246
Summerland	Box 639, Penticton V2A 6P1	494-0401
Vancouver	Milk Board	299-5787
Vanderhoof	Church Avenue, Box 987 V0J 4K7	567-2111
Vernon	4607 - 23rd Street V1T 4K7	549-5580
Victoria	Minister's Office, Parliament Buildings V8V 1X4	387-1978
	Head Office, 808 Douglas Street V8W 2Z7	387-5121
Williams Lake	540 Borland Street V2G 1R8	398-4500